



# Military Family Housing Privatization

at Charleston Air Force Base,  
South Carolina



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Prepared for:  
Air Force Center for Engineering  
and the Environment  
and  
Charleston Air Force Base

Prepared by:



December 2009

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# **Final Finding of No Significant Impact:**

## **Charleston Air Force Base, South Carolina**

### **Military Family Housing Privatization Environmental Assessment**

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The United States Air Force (USAF) has prepared an Environmental Assessment (EA) that evaluates the potential environmental and socioeconomic impacts associated with the privatization of Military Family Housing (MFH) at Charleston Air Force Base (CAFB), South Carolina. The MFH is currently owned, operated, and managed by CAFB.

### **Description of the Proposed Action**

The Proposed Action involves the privatization of MFH at CAFB. Under the Proposed Action, the USAF would transfer ownership of the MFH units, associated infrastructure, and certain utilities that exclusively serve the MFH area to a private sector Project Owner (PO). The USAF would retain ownership of the land, but would transfer management of the land to the PO through a 50-year lease arrangement. The primary components of the Proposed Action are as follows:

- The USAF would lease four land parcels (Parcels A, B, C, and D) to the PO (a total of approximately 294 acres).
- The USAF would demolish 247 MFH units in Parcel B and convey the remaining 476 units and associated infrastructure/utilities within all parcels to the PO.
- The PO would demolish the remaining 71 units in Parcel B, demolish 178 units in Parcel D, and construct 118 new units in Parcel B.
- The PO would renovate the remaining 76 units in Parcel D and 141 of the 151 units in Parcel A.
- The PO would construct several new community/recreational facilities within the parcels.

### **No-Action Alternative**

Under the No-Action Alternative, CAFB would retain control and management of its MFH units and associated infrastructure/utilities. There would be no demolition, renovation, or construction of housing units or construction of any new community/recreational features within the MFH area.

### **Environmental Consequences**

#### **Proposed Action**

Based on the findings of the EA, the Proposed Action would have no effect on air space, prime farmland, land use, geology, floodplains, wetlands, cultural resources, environmental justice, or protection of children. The Proposed Action is expected to

have little potential to impact topography, groundwater, surface water hydrology, or sensitive species.

Construction and demolition activities associated with the Proposed Action would have minor impacts on noise levels, soils, water quality, vegetation, wildlife, air quality, and traffic flow. Increased noise levels would be intermittent and limited to normal working hours and the construction/demolition period. The potential for soil erosion and water quality impacts would be minimized by implementing appropriate best management practices (BMPs) during construction and soil stabilization/revegetation measures during and after construction. Impacts to vegetation, which consists primarily of maintained lawns, landscaping vegetation, and scattered trees, would be limited to the immediate construction/demolition areas and the areas would be revegetated after construction/demolition is completed. Large trees would be preserved as much as possible. Any disturbance experienced by common wildlife species would be limited to the construction/demolition period. The potential for incidental animal mortality occurring during construction/demolition is considered to be low and any losses would not seriously affect regional animal population levels. Air emissions would be limited to the construction/demolition period and fugitive dust would be controlled and minimized by implementing appropriate BMPs. Traffic levels would return to current levels after the construction/demolition work is completed.

To minimize the potential for accidents and exposure to asbestos-containing materials, lead-based paint, and poly-chlorinated biphenyls, workers would wear and use appropriate protective equipment and would follow all applicable Occupational Safety and Health Administration (OSHA) standards and procedures. Provided that all appropriate worker protection measures are taken and all applicable OSHA regulations and guidelines are followed, the potential for safety and occupational health impacts under the Proposed Action would be low.

The Proposed Action would have positive impacts on certain socioeconomic and community resources. Under the Proposed Action, the overall quality of available housing and community/recreational features at CAFB would improve and the USAF would realize long-term economic savings by transferring the long-term management of MFH at CAFB to the private sector. Increased employment and expenditures during the construction/demolition period would also have a short-term, positive impact on the local economy.

Adverse cumulative impacts would not result from the interaction of the Proposed Action with other past, present and reasonably foreseeable actions occurring at CAFB and in the surrounding community at large.

### **No-Action Alternative**

Under the No-Action Alternative, CAFB would continue to have excess housing units and housing units which do not meet current DoD housing standards. The No-Action Alternative would also prevent the USAF from reducing costs associated with long-term management of MFH at CAFB.

## Conclusion

The attached EA was prepared pursuant to 32 Code of Federal Regulations 989 and U.S. Council on Environmental Quality regulations (Title 40, U.S. Code, Parts 1500-1508) for implementing the procedural requirements of the National Environmental Policy Act. The finding of this EA is that each of the considered alternatives, to include the Proposed Action, would have no significant impact on the human or natural environment. Accordingly, CAFB may select any of the alternatives for implementation. A Finding of No Significant Impact is issued and no Environmental Impact Statement is required.

## Restrictions

No restrictions are necessary for the Proposed Action.



JOHN. M. WOOD, Colonel, USAF  
Commander, 437<sup>th</sup> Airlift Wing



Date

# **Military Family Housing Privatization at Charleston Air Force Base, South Carolina**

**Prepared for:**

**Air Force Center for Engineering and the Environment  
and  
Charleston Air Force Base**

**Prepared by:**



December 2009



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# Acronyms and Abbreviations

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ACM	asbestos-containing material
AF	Air Force
AFI	Air Force Instruction
AMC	Air Mobility Command
AST	aboveground storage tank
AW	Airlift Wing
BG	Block Group
BMPs	best management practices
CAA	Clean Air Act
CAFB	Charleston Air Force Base
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CT	Census Tract
CWA	Clean Water Act
dBA	A-weighted decibel scale
DoD	Department of Defense
EA	Environmental Assessment
EBS	Environmental Baseline Survey
EO	Executive Order
ERP	Environmental Restoration Program
EUL	Enhanced Use Lease
FONPA	Finding of No Practicable Alternative
FR	Federal Register
FY	Fiscal Year
HCP	Housing Community Profile
HRMA	Housing Requirements and Market Analysis
ICRMP	Integrated Cultural Resources Management Plan
IICEP	Interagency and Intergovernmental Coordination for Environmental Planning
INRMP	Integrated Natural Resources Management Plan
LBP	lead-based paint
Ldn	day-night averaged sound level
MFH	Military Family Housing
MBTA	Migratory Bird Treaty Act
MHPI	Military Housing Privatization Initiative
msl	mean sea level
NAAF	North Auxiliary Airfield
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRCS	Natural Resources Conservation Service

NRHP	National Register of Historic Places
OSHA	Occupational Safety and Health Administration
OWS	oil-water separator
PCBs	polychlorinated biphenyls
PO	Project Owner
PSD	Prevention of Significant Deterioration
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
SCDHEC	South Carolina Department of Health and Environmental Control
SCE&G	South Carolina Electric and Gas Company
SOQ	Senior Officer Quarter
SWPPP	Stormwater Pollution Prevention Plan
U.S.	United States
USAF	United States Air Force
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USC	United States Code
UST	underground storage tank
WQA	Water Quality Act



# 1.0 Purpose and Need for Action

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## 1.1 Background

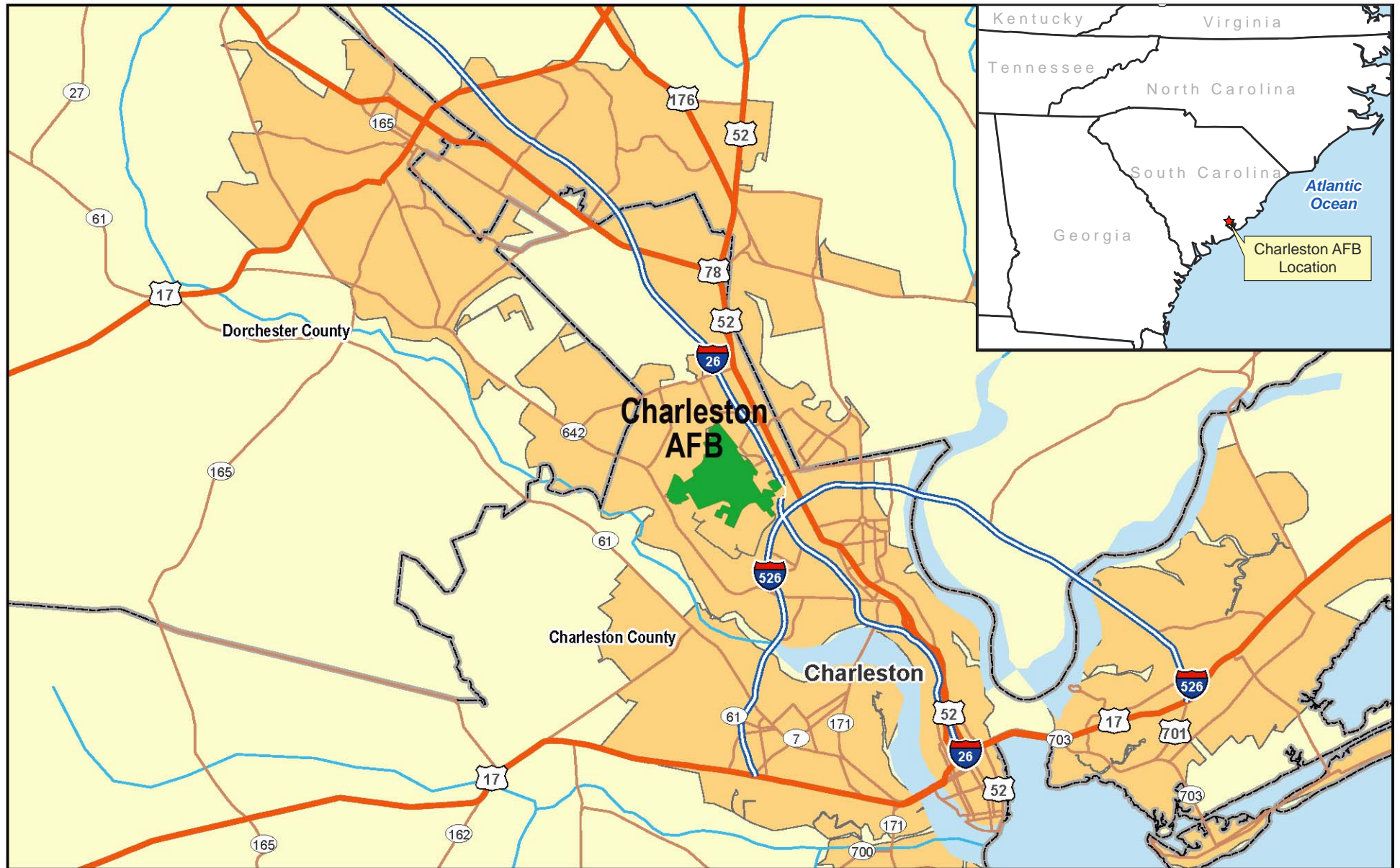
Charleston Air Force Base (CAFB) is located within the City of North Charleston in Charleston County, South Carolina (Figure 1-1). CAFB encompasses approximately 3,733 contiguous acres and is under the control of the Air Mobility Command (AMC). Hunley Park (271 acres) and the Former CAFB Housing Annex (24 acres) are noncontiguous parcels of CAFB located adjacent to the main Base property. CAFB also manages North Auxiliary Airfield (NAAF), which is a 2,392-acre tract approximately 85 miles to the northwest in Orangeburg County, South Carolina. NAAF is used primarily as a training area for CAFB pilots and can also serve as an alternate landing site during emergency situations.

### 1.1.1 Military Mission

CAFB is home to the 437<sup>th</sup> Airlift Wing (AW). The 437<sup>th</sup> AW operates the C-17 Globemaster III strategic airlift aircraft and has four operational groups consisting of 21 squadrons and one wing staff directorate. The mission of the 437<sup>th</sup> AW is to provide airlift of troops/passengers, military equipment, cargo, and aeromedical equipment/supplies. The 437 AW also provides administrative, medical, and logistical support to 437<sup>th</sup> AW units, tenant organizations, and the CAFB community. The 437<sup>th</sup> AW is augmented by the 315<sup>th</sup> AW, which is a collocated Air Force Reserve Command wing that shares the same C-17 aircraft, facilities, and equipment. CAFB also has numerous tenant organizations, including the 1<sup>st</sup> Combat Camera Squadron and the 560<sup>th</sup> Red Horse Squadron. The 1<sup>st</sup> Combat Camera Squadron is one of two combat documentary squadrons, and the only one assigned to the East Coast.

### 1.1.2 History

The area currently occupied by CAFB was operated as Charleston Municipal Airport beginning in 1931. The United States (U.S.) Army Air Corps took control of the site in 1941, and used it during World War II as a combat training site for air depot and services personnel as well as a base of operations for anti-submarine patrols. The property was returned to the City of Charleston in 1946. In 1952, an agreement between the City of Charleston and the Air Force (AF) allowed the establishment of a troop carrier base and joint use of the runways. Charleston International Airport currently operates under a joint-use agreement between CAFB and the Charleston County Aviation Authority for shared use of runways and navigational aids by civilian general aviation, and commercial and military aircraft.



Interstate Highway    River    Water Body  
 Highway    County Boundary    Charleston AFB Boundary  
 Major Road    Urban Area    Data Source: ESRI Streetmap USA, 2006



FIGURE 1-1  
 Charleston AFB and Surrounding Area  
 EA for MFH Privatization, Charleston AFB

### 1.1.3 Military Family Housing

The existing military family housing (MFH) at CAFB is located in the western part of the Base in the areas designated as Main Base Housing North, Main Base Housing South, and Hunley Park (Figure 1-2). CAFB has an existing MFH inventory of 723 units. The inventory consists of a mixture of two-, three-, and four-bedroom single-family and duplex units for officers and enlisted personnel. All Main Base Housing units were constructed in 1959 except for 10 Senior Officer Quarter (SOQ) units in Main Base Housing North, which were constructed in 2007. The Hunley Park units were constructed from 1959 through 1962. All of the older units in Main Base Housing North were renovated in 2002 except for six units, which were renovated in the late 1990s. All Hunley Park units were renovated in 2004.

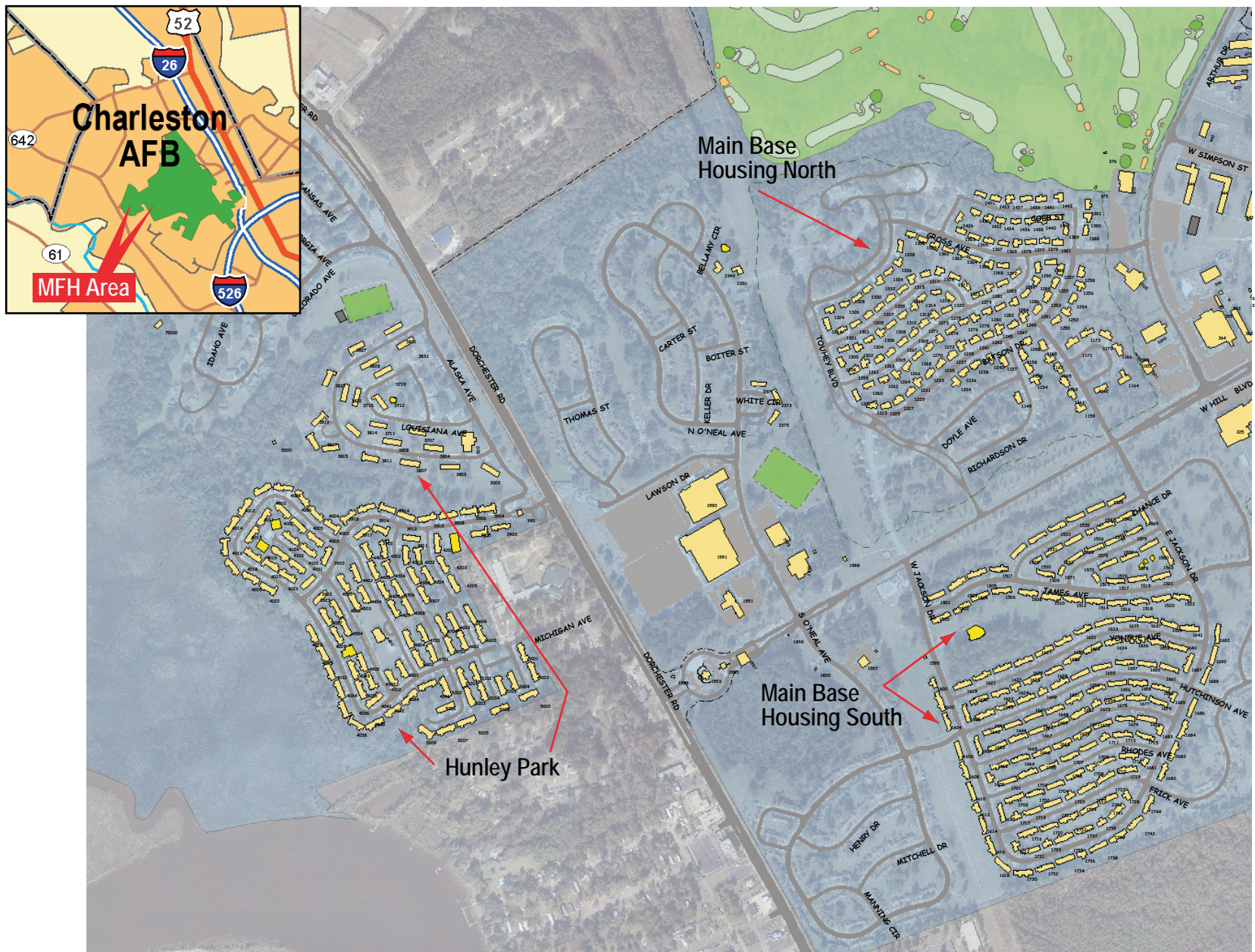
## 1.2 Proposed Action

Privatization is the transfer of any government function to the private sector. In addition to previous regulations authorizing privatization of MFH, 10 U.S. Code (USC) §§ 2871 et seq. provides for privatization of MFH through the acquisition or construction of housing units on or near military installations within the U.S. by qualified entities, who become the Project Owner (PO). The MFH area at CAFB has been evaluated and determined to be suitable for privatization. Under the Proposed Action, the Government would transfer ownership of the MFH units, associated infrastructure, and certain utilities that exclusively serve the MFH area to the PO. The AF would retain ownership of the land, but would transfer management of the land to the PO through a 50-year lease arrangement.

The 2006 Housing Requirements and Market Analysis (HRMA) for CAFB identified a Fiscal Year (FY) 2011 requirement of 476 housing units for the Base (Department of Defense [DoD], 2006). A Housing Community Profile (HCP) for CAFB was developed in 2008 to assist with the planning and programming of MFH at CAFB based on the requirements identified by the HRMA (JM Waller Associates, 2008). Based on subsequent housing requirement analyses, the AF determined that CAFB should have an end-state number of 345 units. CAFB has an existing MFH inventory of 723 units and, therefore, a surplus of 378 housing units.

Under the Proposed Action, the AF would demolish 247 units in Main Base Housing South. The remaining 476 units at CAFB would be conveyed to the PO. The PO would demolish the remaining 71 units in Main Base Housing South, demolish 178 units in Hunley Park, and construct 118 new units in Main Base Housing South to achieve the end-state number of 345 units. The PO would renovate the remaining units in Hunley Park and most of the units in Main Base North, as well as construct several new community/recreational features throughout the housing area. The Proposed Action is described in detail in Section 2.1.





Source: Charleston AFB

FIGURE 1-2  
MFH Areas at Charleston AFB  
EA for MFH Privatization, Charleston AFB



## 1.3 Purpose and Need for Proposed Action

The purpose of the Proposed Action is to provide an appropriate number of adequate housing units for military families living on CAFB and to reduce the cost of providing this housing, resulting in economic savings to the AF. There is a need for housing privatization as a means to accelerate the Base's ability to provide military families with access to safe, quality, affordable housing in a community where they choose to live. Based on housing requirement analyses, the AF has determined that CAFB should have an end-state number of 345 housing units. CAFB has an existing MFH inventory of 723 units and, therefore, a surplus of 378 housing units.

The Proposed Action is needed to eliminate excess units and to upgrade/replace inadequate units at CAFB. Defense Planning Guidance requires that DoD upgrade or replace all inadequate MFH by FY 2010, or eliminate the inadequate MFH housing without replacement if an appropriate number of adequate housing units is available (Office of the Secretary of Defense, 2002). The MFH units proposed to be eliminated are old and do not meet current DoD housing standards.

The 1996 Defense Authorization Act permits the military to use private capital to meet housing requirements where it is economically feasible. The AF has determined that privatization would allow CAFB to meet the identified end-state number of housing units within the specified timeframe and to provide favorable long-term management of these resources.

## 1.4 Applicable Regulatory Requirements, Permits, and Coordination

The following regulations, permits, or coordination may be applicable to the Proposed Action as described in this Environmental Assessment (EA):

- The National Environmental Policy Act (NEPA) of 1969 and implementing regulations in Title 40 Code of Federal Regulations (CFR), Parts 1500-1508 (40 CFR 1500-1508)
- The National Historic Preservation Act of 1966 (16 USC 470 et seq., as amended) and enabling legislation Title 36 (CFR), Part 800 (36 CFR 800)
- 32 CFR Part 989
- Air Force Instruction (AFI) 91-302, *Air Force Occupational and Environmental Safety, Fire Protection, and Health Standards*
- AFI 32-1052, *Facility Asbestos Management*
- AFI 32-7042, *Solid and Hazardous Waste*
- AFI 32-7064, *Integrated Natural Resources Management*
- The Coastal Zone Management Act of 1972
- The Endangered Species Act of 1973 (16 USC 1531-1543)

- The Fish and Wildlife Coordination Act (16 USC 661, et seq.)
- Executive Order (EO) 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds*
- The Migratory Bird Treaty Act (MBTA) (16 USC 703, et seq.)
- The Clean Water Act (CWA) of 1977 and the Water Quality Act (WQA) of 1987 (33 USC 1251 et seq., as amended)
- EO 11990, *Protection of Wetlands*
- The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (as amended by the Superfund Amendments and Reauthorization Act [SARA] of 1986)
- The Resource Conservation and Recovery Act (RCRA) of 1976
- The Archeological Resources Protection Act of 1979
- EO 11988, *Floodplain Management*
- The Clean Air Act (CAA) (42 USC 7401 et seq., as amended)
- The Noise Control Act of 1972
- EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*
- EO 13045, *Protection of Children from Environmental Health Risks and Safety Risk*
- EO 13423, *Strengthening Federal Environment, Energy, and Transportation Management*
- The Energy Independence and Security Act of 2007
- South Carolina Department of Health and Environmental Control (SCDHEC) National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges from Construction Activities (obtained at CAFB on an as needed basis)
- SCDHEC NPDES General Permit for Stormwater Discharges Associated with Industrial Activity (Permit Number SCR000000)

## 1.5 Authority and Scope of the Environmental Assessment

This document was prepared in accordance with the requirements of the NEPA of 1969, the Council on Environmental Quality (CEQ) regulations of 1978, and 32 CFR Part 989. This EA assesses the potential environmental impacts associated with the Proposed Action of privatizing MFH at CAFB as well as those associated with the No-Action Alternative of maintaining existing conditions.

## 1.6 Interagency Coordination and Public Involvement

The AF invites public participation in the evaluation of the Proposed Action through the NEPA process. Consideration of the views and information of all interested persons

promotes open communication and enables better decision-making. The Intergovernmental Coordination Act and EO 12372, *Intergovernmental Review of Federal Programs*, require Federal agencies to cooperate with and consider state and local views in implementing a federal proposal. AFI 32-7060, *Interagency and Intergovernmental Coordination for Environmental Planning* (IICEP), requires the AF to implement the IICEP process, which is used for the purpose of facilitating agency coordination and implements scoping requirements under NEPA.

A 30-day public review was held from July 24, 2009 through August 22, 2009 to solicit comments on this EA. The public review period was announced in a public notice published in *The Post and Courier*, Charleston, South Carolina. Copies of the EA were made available to the public during the review period at the Dorchester Road Regional Library located at 6325 Dorchester Road, North Charleston, South Carolina, 29418. A copy of the public notice that was published is presented as Appendix B. No comments were received during the public review period.

This EA was also coordinated with federal, state, and local entities through letter correspondence. All associated correspondence is included in Appendix A and discussed in pertinent sections of this EA.

## 1.7 Issues Eliminated from Detailed Analysis

The resource areas discussed below have been eliminated from detailed analysis in this document because there is no potential for the Proposed Action to impact these resources.

### 1.7.1 Air Installation Compatible Use Zone

The CAFB MFH area is located outside all clear zones, accident potential zones, and noise contours identified in the 2004 CAFB Air Installation Compatible Use Zone (AICUZ) Study (CAFB, 2004). No activity that would be associated with MFH privatization under the Proposed Action would affect or be affected by airfield operations or management. For these reasons, AICUZ was eliminated as an issue warranting detailed analysis in this EA.

### 1.7.2 Prime Farmland

The Charleston-North Charleston area is defined as an Urbanized Area by the U.S. Census Bureau; therefore, soils at CAFB do not meet the definition of prime farmland. For this reason, prime farmland was eliminated as an issue warranting detailed analysis in this EA.

## 1.8 Issues Studied in Detail

The following resource areas are analyzed in detail in this EA:

- Land Use
- Noise
- Geology, Topography, and Soils
- Hydrology
- Water Quality
- Biological Resources
- Safety and Occupational Health

- Air Quality
- Hazardous Materials and Wastes
- Cultural Resources
- Socioeconomics
- Community Resources
- Environmental Justice and Protection of Children
- Traffic Flow
- Utility Infrastructure

## 1.9 Document Organization

This EA follows the organization established by the CEQ regulations (40 CFR, Parts 1/500-1508). This document consists of the following sections:

- 1.0 Purpose and Need for Action
- 2.0 Description of Proposed Action and Alternatives
- 3.0 Affected Environment
- 4.0 Environmental Consequences
- 5.0 Plan, Permit, and Management Requirements
- 6.0 List of Preparers
- 7.0 List of Contacts
- 8.0 References



## 2.0 Description of Proposed Action and Alternatives

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Under NEPA, this EA is required to address the potential environmental impacts of the Proposed Action, No-Action Alternative, and reasonable action alternatives. Reasonable action alternatives must be reasonably foreseeable and adequately defined for decision-making (any necessary preceding events having taken place), affordable, capable of implementation, and capable of meeting the defined need for the action. During preliminary planning, an alternatives analysis was conducted to identify potential reasonable action alternatives. The potential action alternatives considered during the alternatives analysis were determined not to be reasonable and, therefore, were dismissed from further consideration.

This section describes the Proposed Action (Privatization Alternative) and No-Action Alternative and also discusses the alternatives considered during preliminary planning but not carried forward for detailed analysis in this EA.

### 2.1 Proposed Action (Privatization Alternative)

The Proposed Action involves the privatization of MFH at CAFB. Under the Proposed Action, the Government would transfer ownership of the MFH units, associated infrastructure, and certain utilities that exclusively serve the MFH area to the PO. The AF would retain ownership of the land, but would transfer management of the land to the PO through a 50-year lease arrangement. The 2006 HRMA for CAFB identified a FY 2011 end-state requirement of 476 housing units for the Base. Based on subsequent housing requirement analyses, the AF determined that CAFB should have an end-state number of 345 units. CAFB has an existing MFH inventory of 723 units and, therefore, a surplus of 378 housing units. The 2008 HCP study, which evaluated existing housing unit conditions at CAFB, was used to determine which housing units at the Base should be eliminated to achieve the identified end-state unit number. The MFH units proposed to be eliminated are old and do not meet current DoD housing standards.

Under the Proposed Action, the following four parcels at CAFB would be leased to the PO: Parcel A - Main Base Housing North, Parcel B - Main Base Housing South, Parcel C - Main Base Exchange South, and Parcel D - Hunley Park (Figure 2-1). The approximate size of the parcels and the number of existing MFH units within the parcels are presented in Table 2-1. As indicated in Table 2-1, there are 151 units in Main Base Housing North, 318 units in Main Base Housing South, 254 units in Hunley Park, and no units in Main Base Exchange South.



TABLE 2-1  
Parcel Size and Unit Number  
*Environmental Assessment for Military Family Housing Privatization, Charleston AFB*

Parcel	Approximate Area (acres)	Number of Units
Parcel A – Main Base Housing North	86	151
Parcel B – Main Base Housing South	83	318
Parcel C – Main Base Exchange South	42	0
Parcel D – Hunley Park	83	254
<b>Total</b>	<b>294</b>	<b>723</b>

Under the Proposed Action, the AF would demolish 247 units in Main Base Housing South. The remaining 476 units at CAFB would be conveyed to the PO. The PO would demolish the remaining 71 units in Main Base Housing South, demolish 178 units in Hunley Park, and construct 118 new units in Main Base Housing South to achieve the end-state number of 345 units. The PO would renovate the remaining 76 units in Hunley Park and 141 of the 151 units in Main Base Housing North. How the units are demolished, constructed, and renovated by the PO would be determined following selection of the PO and would be based on an accepted proposal from the selected PO.

In addition to the MFH units, associated infrastructure and certain utilities that exclusively serve the MFH area would also be conveyed to the PO. Infrastructure within the parcels to be conveyed include Building 1597 (Housing Maintenance Shop) in Main Base Exchange South, Building 4450 (Residential Recreation Building) in Hunley Park, playgrounds in Main Base Housing South and Hunley Park, and recreational areas/facilities. The AF would retain control of Building 3003 (Fire Station) and Building 3902 (Guard Shack) in Hunley Park. Utilities to be conveyed to the PO include electricity, water (excluding water mains in Parcels A, B, and C), sewer (excluding sewer mains), and storm drainage.

Several new community/recreational features would be constructed by the PO. The types, number, and specific locations of the features would be determined following selection of the PO and would be based on an accepted design proposal from the selected PO. New community/recreational features that have been considered by the AF and that could potentially be constructed by the PO include the following: community center/clubhouse, group picnic areas, swimming pool, sports field complex (such as ballfields and track), road/trail connectivity among all housing areas, concrete walks or asphalt trails leading to playgrounds, tennis courts, volleyball courts, and covered bus shelters. Most of these features would be constructed in Main Base Exchange South and/or in Main Base Housing South. The PO would be responsible for maintenance of the constructed features.

The PO would be responsible for all construction, demolition, and renovation activities and for management and maintenance of the leased parcels per the terms and conditions of the privatization agreement. If during the lease term, the occupancy of the new privatized housing were to fall below 95 percent for specified periods, the PO could offer vacant housing units to other eligible tenants in accordance with the Rental Rate Management Plan

and the Unit Occupancy Plan. However, the PO would have to allow for immediate rental to target tenants, which include authorized members of the uniformed services and their families (U.S. Air Force [USAF], 2006). If occupancy were to fall below 95 percent for 30 consecutive days, the PO could rent the units to Federal Civil Service employees, Retired Military personnel, and Retired Civil Service employees. After 60 consecutive days with occupancy below 95 percent, the PO could rent to DoD contractors. After 90 consecutive days with occupancy below 95 percent, the PO could rent the vacant units to the general public (USAF, 2006).

The primary components of the Proposed Action are summarized as follows:

- The AF would lease Parcels A, B, C, and D to the PO (a total of approximately 294 acres).
- The AF would demolish 247 MFH units in Parcel B and convey the remaining 476 units and associated infrastructure/utilities within the parcels to the PO.
- The PO would demolish the remaining 71 units in Parcel B, demolish 178 units in Parcel D, and construct 118 new units in Parcel B.
- The PO would renovate the remaining 76 units in Parcel D and 141 of the 151 units in Parcel A.
- The PO would construct several new community/recreational facilities within the parcels.

As discussed above, some aspects of the Proposed Action would be determined following selection of the PO such as the types, number, and specific locations of the new community/recreational features. To ensure that the greatest level of potential impact of these aspects is assessed, this EA assumes that all of the features that have been considered by the AF (discussed above) would be constructed. Based on space availability within the parcels to be leased, this EA assumes that most of these features would be constructed in Main Base Exchange South and/or in Main Base Housing South. To ensure that all potential locations are assessed, available space within the other leased parcels is also assessed in this EA.

## 2.2 No-Action Alternative

NEPA requires consideration of a No-Action Alternative to the Proposed Action. Under the No-Action Alternative, CAFB would retain control and management of its MFH units and associated infrastructure/utilities. There would be no demolition, renovation, or construction of housing units or construction of any new community/recreational features within the MFH area. Under the No-Action Alternative, CAFB would continue to have an excess of housing units and housing units that do not meet current DoD housing standards. The No-Action Alternative would also prevent the AF from reducing costs associated with long-term management of MFH at CAFB. The No-Action Alternative would not meet the defined need for the action.



## **2.3 Alternatives Considered but Not Carried Forward**

The alternatives that were considered during preliminary planning but not carried forward for detailed analysis in this EA are discussed below.

### **2.3.1 Demolition of Existing Units Without Privatization**

Under this alternative, CAFB would not privatize MFH but would demolish excess housing units as described for the Proposed Action. Under this alternative, CAFB would achieve the identified end-state unit number and would eliminate housing units that do not meet current DoD housing standards in accordance with the mandate to eliminate inadequate housing by 2010. However, this alternative would prevent the AF from reducing costs associated with long-term management of MFH at CAFB. Because this alternative would not meet the defined need for the AF to reduce housing management costs at CAFB, it is not a reasonable alternative and is not carried forward for detailed analysis in this EA.

### **2.3.2 Privatization Without Demolition of Existing Units**

Under this alternative, CAFB would privatize MFH but would not demolish excess housing units. Under this alternative, the AF would meet the defined need to reduce long-term housing management costs at CAFB. However, this alternative would not allow CAFB to meet the identified end-state unit number or to eliminate housing units that do not meet current DoD housing standards. Therefore, this alternative is not reasonable and is not carried forward for detailed analysis in this EA.



## 3.0 Affected Environment

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### 3.1 Land Use

#### 3.1.1 Regional Geographic Setting and Location

CAFB is located in the Lowcountry region of South Carolina, which is characterized by low elevations, flat topography, and an abundance of wetlands. The Base is within the City of North Charleston, which is located approximately three miles north of the City of Charleston.

Charleston is a popular tourist destination well known for its rich culture and history. North Charleston is the State's third largest city. It encompasses more than 76.6 square miles and has a current population of more than 95,000. Incorporated in June 1972, North Charleston has grown primarily through annexation of developed land. The City has a rich history that includes hosting a number of important military installations. Today, North Charleston has a vibrant economy and it can boast to be the State's leader in retail sales for the 16<sup>th</sup> consecutive year. North Charleston is an important freight trans-shipment point, having two major railheads, two port facilities, and a general aviation airport.

Most of the land in the vicinity of CAFB has been strip mined or developed. CAFB is bordered by residential, commercial, industrial, and open space land uses. The dominant land use type within CAFB is airfield, which accounts for approximately 42 percent of the total land cover within the Base. Other land use types within CAFB include administrative, community, housing, industrial, medical, open space, and outdoor recreation.

#### 3.1.2 Project Area

Most of the project area is designated as family housing land use (CAFB, 2003). Relatively small areas of open space land use exist in the northwestern portions of both Parcels C and D. Parcels A, B, and D contain housing units, roads, recreational areas/facilities, and associated residential infrastructure. All of the housing units in Parcel C were removed in 2007, however, the original residential road network still exists within the parcel as does the Housing Maintenance Shop (Building 1597).

### 3.2 Noise

Noise, in the context of this analysis, refers to sounds generated by activities that could affect employees of the Base, on-base residents, off-base residents, or wildlife. Human hearing is best approximated by using an A-weighted decibel scale (dBA). When sound pressure doubles, the dBA level increases by three (The Engineering Toolbox, 2007). Psychologically, most humans perceive a doubling of sound as an increase of 10 dBA (U.S. Environmental Protection Agency [USEPA], 1974).

Noise levels are often expressed as day-night averaged sound level (L<sub>dn</sub>), which is the dBA sound level over a 24-hour day and night period. The L<sub>dn</sub> also applies a 10-dBA penalty to

nighttime sounds occurring between 10 pm and 7 am to account for the desirability of a quieter night than day. A noise level considered low is less than 45 dBA, a moderate noise level is 45-60 dBA, and a high noise level is above 60 dBA. In busy urban areas, noise levels are typically near 75 dBA, and can reach 85 dBA near airports and major freeways (California State Lands Commission, 2005). Sound levels in rural residential areas typically average 40 dBA. Noise levels in suburban neighborhoods typically range from 50 dBA to 60 dBA (dB Engineering, 2004). The maximum acceptable noise level for most residential land uses is 65 dBA Ldn.

Based on data presented in the USEPA publication, *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances* (USEPA, 1971), outdoor construction noise levels range from 78 dBA to 89 dBA, approximately 50 feet from a typical construction site. Noise levels at 50 feet from a source decrease by approximately 3 dBA over a hard, unobstructed surface (such as asphalt), and by approximately 4.5 dBA over a soft surface (such as vegetation). Table 3-1 presents typical noise levels (dBA at 50 feet) estimated by USEPA for the main phases of outdoor construction.

TABLE 3-1  
Typical Noise Levels for Outdoor Construction  
*Environmental Assessment for Military Family Housing Privatization, Charleston AFB*

Construction Phase	Noise Level (dBA at 50 feet from source)
Ground Clearing	84
Excavation, Grading	89
Foundations	78
Structural	85
Finishing	89

dBA – decibel on the A-weighted scale

Source: USEPA, 1971

The primary sources of noise at CAFB include aircraft operations, vehicular traffic, sirens, and intermittent construction. Parcels A, B, and D contain houses and, therefore, are considered noise-sensitive areas. The only off-base noise-sensitive area in the vicinity of the project parcels is a residential area located just south of Parcel D and west of Parcel C.

### 3.3 Geology, Topography, and Soils

CAFB is located between the Ashley and Cooper Rivers in the outer part of the Atlantic Coastal Plain physiographic province of South Carolina (CAFB, 2008). The Outer Coastal Plain of South Carolina consists of layers of unconsolidated sediments and partially lithified sedimentary rocks that are of Late Cretaceous to Holocene age. The surficial coastal terrace deposits in the area average 30 feet in thickness and consist primarily of shell, sand, silt, and clay. The Ladson Formation is the principal coastal terrace deposit in the vicinity of CAFB. The Ladson Formation is underlain by the Cooper Formation, which is a massive, impermeable, olive colored, fine-grain carbonate deposit. The Cooper Formation is underlain by a sequence of sedimentary units greater than 2,000-feet thick that extend to the crystalline basement rocks.

The topography of CAFB is relatively flat, with surface elevations varying from an average of 15 feet above mean sea level (msl) along the southern edge of the Base to 45 feet above msl along the northern edge of the Base (CAFB, 2008). Most of the area of the project parcels is within the elevation range of 25 to 35 feet above msl.

The Natural Resources Conservation Service (NRCS) has mapped 23 soil types at CAFB. Surface soils at CAFB are typically sand and sandy loams. The clay content of the soils generally increases with depth. Permeability is relatively high in surface soils (6.0 to 20 inches per hour), but decreases with increasing clay content and depth (0.06 to 6.0 inches per hour). The increase in clay content and the decrease in permeability with depth cause rapid saturation of the sandy surface soils following rains (CAFB, 2008).

## 3.4 Hydrology

### 3.4.1 Groundwater

Many of the sedimentary formations of the Coastal Plain are able to store and convey large volumes of groundwater (CAFB, 2008). The surficial aquifer at CAFB is relatively shallow with groundwater elevations ranging from approximately 0.25 to 13 feet below land surface (CAFB, 2003). The groundwater table is deepest on the western side of CAFB and generally rises in the eastern direction. The water table at any given location is estimated to fluctuate between 1 and 6 feet per year (CAFB, 2003).

### 3.4.2 Surface Water

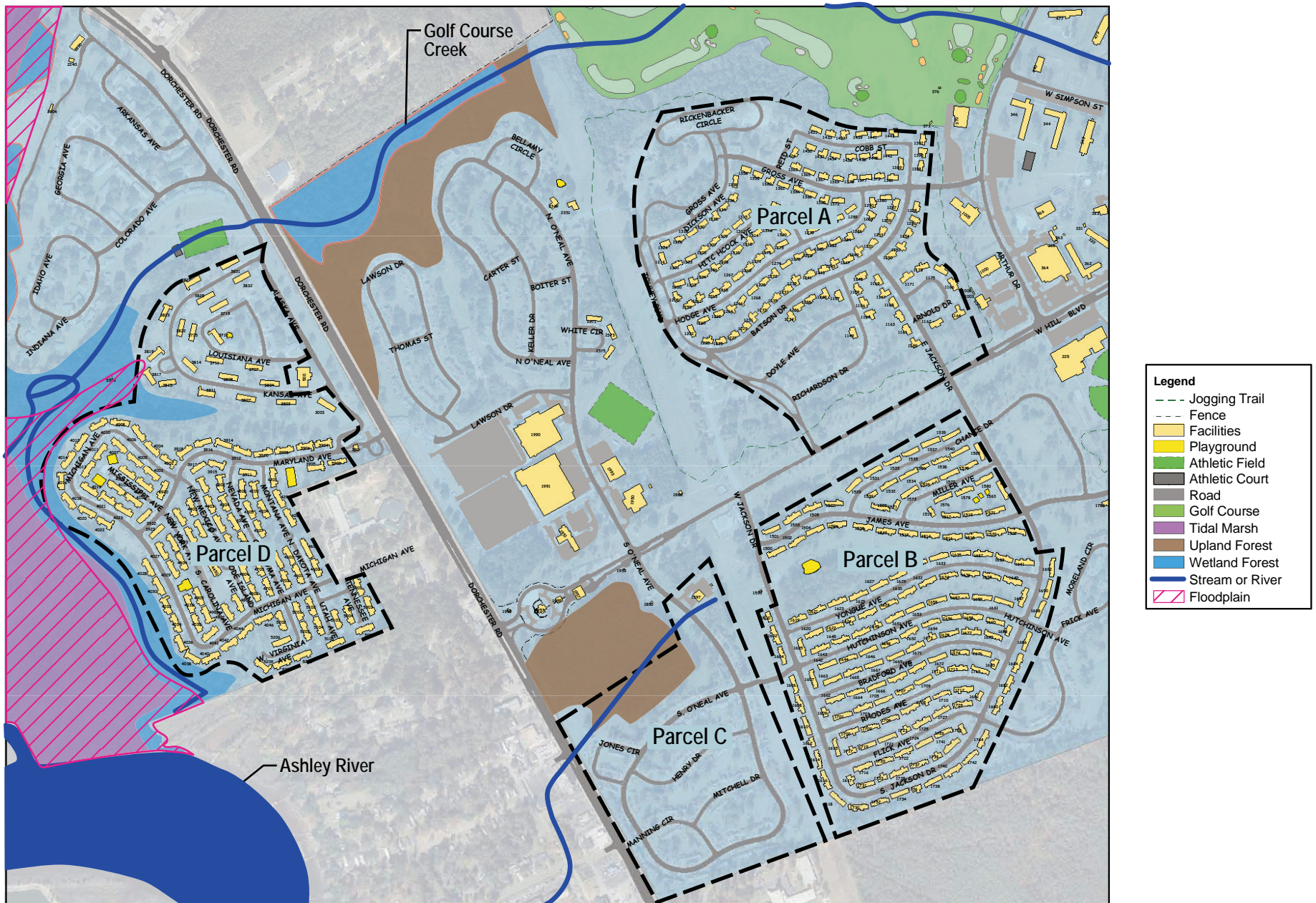
The hydrology of CAFB is driven by low elevations and runoff from developed areas (CAFB 2008). Base hydrology has been altered by phosphate strip mining that occurred between 1867 and 1937 and by more recent land disturbances including impervious surfaces, road berms, ditches, and culverts.

CAFB is located between the Ashley and Cooper Rivers. The primary surface waters at CAFB are Golf Course Creek, Runway Creek, and Turkey Creek (CAFB, 2008). Golf Course Creek flows in a southwestern direction and drains into Popperdam Creek, a tributary of the Ashley River. Runway Creek flows in a southwestern direction and drains into the Ashley River. Turkey Creek flows in a northeastern direction and drains into Goose Creek, a tributary of the Cooper River. Three small unnamed streams also exist at CAFB.

Figure 3-1 shows the surface waters within and in the vicinity of the project parcels. As shown on Figure 3-1, Golf Course Creek runs adjacent to the northern and western boundaries of Parcel D and an unnamed stream flows through Parcel C. The unnamed stream ultimately discharges into the Ashley River.

### 3.4.3 Floodplains

EO 11988, *Floodplain Management* directs Federal agencies to avoid, to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative.



Source: Charleston AFB

FIGURE 3-1  
Natural Features of Project Area  
EA for MFH Privatization, Charleston AFB



The only part of CAFB that is located within the 100-year floodplain is its westernmost portion. The 100-year floodplain in this part of the Base is associated with the tributaries and tidal marsh of the Ashley River. The 100-year floodplain in this area is located adjacent to the western and northwestern boundaries of Parcel D and a small portion of the floodplain is located within the parcel boundary (see Figure 3-1).

## 3.5 Water Quality

As authorized by the CWA of 1977, the NPDES permitting program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. CAFB operates under a SCDHEC NPDES General Permit for Stormwater Discharges Associated with Industrial Activity (Permit Number SCR000000). CAFB currently implements a Stormwater Pollution Prevention Plan (SWPPP), prepared in 2007, to comply with the requirements of this permit (CAFB 2007). The goal of the 2007 SWPPP is to prevent or reduce pollutants at the source that can be conveyed by stormwater discharges. CAFB also operates under a SCDHEC NPDES General Permit for Stormwater Discharges from Regulated Small Municipal Separate Storm Water Systems (MS4S, Permit Number SCS000000). CAFB obtains SCDHEC NPDES General Permits for Stormwater Discharges from Construction Activities and implements associated SWPPPs as needed for construction and other land disturbance activities that require such permits.

Stormwater runoff from most parts of CAFB, including from the project parcels, ultimately drains into the Ashley River. The Ashley River is included on the §319 list of waters impacted by urban runoff (CAFB 2007). Water samples collected by SCDHEC from upstream and midstream sites on the river indicate numerous excursions of fecal coliform and dissolved oxygen. Water samples collected from the downstream sites also indicate numerous excursions of fecal coliform and dissolved oxygen, together with scattered elevated levels of toxic materials and turbidity. The Ashley River is also included on the §304(l) long list of waters impacted by nontoxic pollutants.

Secondary containment structures in use at CAFB that prevent the release of spills of hazardous material or waste to the environment, include dikes, curbs, oil-water separators (OWSs), drip pans, and collection systems (CAFB, 2007). CAFB operates 30 OWSs, the majority of which are gravity separators that discharge to sanitary sewer.

## 3.6 Biological Resources

The 2008 CAFB Integrated Natural Resources Management Plan (INRMP) provides guidance on the management of biological resources at CAFB in concert with the mission of the Base (CAFB, 2008). Based on the 2008 CAFB INRMP, there are 7 biotic community types at CAFB: mowed/airfield, clearcut-scrub/shrub, wetland forest, upland forest, golf course, residential/developed, and tidal marsh.

### 3.6.1 Vegetation

Most of CAFB is developed and consists of buildings and paved areas (runways, airfields, and roads) that are devoid of vegetation. Semi-improved and improved areas account for most of the vegetation cover at CAFB (CAFB, 2008). These areas consist of maintained

grasses and landscaping vegetation within the MFH area and golf course, and adjacent to utility lines, roads, railroads, taxiways, and buildings. Typical grasses that exist at CAFB include common Bermuda, centipede, rye grass and St. Augustine.

Vegetation within the project parcels primarily consists of maintained lawns, landscaping vegetation, and scattered trees. Upland forest exists within the northern part of Parcel C and wetland forest exists within the western and northwestern parts of Parcel D (See Figure 3-1). Upland forests at CAFB are dominated by sweetgum (*Liquidambar styraciflua*) and red maple (*Acer rubrum*) (CAFB, 2008). Dominant plant species within wetland forests at the Base include sweetgum, red maple, black willow (*Salix nigra*) sweetbay (*Magnolia virginiana*), viburnum (*Viburnum dentatum*), redbay (*Persea borbonia*), elderberry (*Sambucus canadensis*), privet (*Ligustrum sinense*), soft rush (*Juncus effusus*), alligator weed (*Alternanthera phylloxeroides*), smartweeds (*Polygonum* spp.), and chain ferns (*Woodwardia* spp.) (CAFB, 2003b).

### 3.6.2 Wildlife

Wildlife that occurs at CAFB is primarily restricted to those species adapted to suburban and urban environments. Wildlife surveys conducted in 2005 identified 54 bird species, 7 amphibian species, 11 reptile species, and 5 mammal species at the Base (North Wind, 2005). Hunting or fishing is not permitted at CAFB; however, some game species do occur at the Base including the bobwhite quail (*Colinus virginianus*), mourning dove (*Zenaidura macroura*), cottontail rabbit (*Sylvilagus floridanus*), gray squirrel (*Sciurus carolinensis*), and white-tailed deer (*Odocoileus virginianus*).

Wildlife that occurs in the project parcels is primarily restricted to those species adapted to a suburban environment. Trees and landscaping vegetation around the housing units within Parcels A, B, and D and the park-like habitat that exists within Parcel C, which no longer contains houses, provide habitat to a variety of common wildlife species. The upland forest that exists within the northern part of Parcel C and the wetland forest that exists within the western and northwestern parts of Parcel D provide relatively high-quality wildlife habitat. Drainage ditches throughout the project parcels are also utilized as habitat by some species.

### 3.6.3 Sensitive Species

The most recent documentation of sensitive species occurring at CAFB is based on rare species surveys conducted in 2003 (North Wind, 2003), wildlife surveys conducted in 2005 (North Wind, 2005), and species sightings by Base natural resources staff.

No plant species that are federally listed as Threatened, Endangered, or Species of Special Concern, nor suitable habitat for such plant species, have been identified at CAFB. The wood stork (*Mycteria americana*), a bird species that is state and federally listed as Endangered, was sighted at CAFB twice in 2008 (CAFB, 2008). Both sightings were of a single individual foraging in a mowed drainage ditch adjacent to Perimeter Road in the northern part of the Base. The nearest wood stork nesting colony is approximately five miles north of CAFB. No other species that are state or federally listed as Threatened or Endangered, nor critical habitat, have been identified at CAFB.

Two Federal Species of Concern, the painted bunting (*Passerina ciris*) and the loggerhead shrike (*Lanius ludovicianus*), occur at CAFB (North Wind, 2005). As Federal Species of

Concern, these species are not legally protected by the Endangered Species Act; however, they are under consideration for future listing by the U.S. Fish and Wildlife Service (USFWS). The upland forests at CAFB, including the upland forest located in the northern part of Parcel C, are considered suitable habitat for the painted bunting. The developed portions of CAFB, which include the airfield, golf course, and most of the housing areas, are considered suitable habitat for the loggerhead shrike.

### 3.6.4 Wetlands

Wetlands are inundated areas, or areas where water is present either at or near the surface of the soil for distinguishable periods throughout the year. EO 11990, *Protection of Wetlands*, directs Federal agencies to avoid, to the extent possible, the long and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative.

The wetlands at CAFB attenuate floodwater, recharge groundwater, provide wildlife habitat, and serve other important functions (CAFB, 2008). The most recent wetland survey at CAFB was conducted in 2003 (Pinnacle Consulting Group, 2003). Based on this survey, a total of 30 wetlands covering a combined total of 354 acres exist at CAFB. Most of the wetlands at the Base are freshwater forested systems. All of the wetlands at CAFB have been impacted by historic phosphate strip mining and disturbed to some degree by logging, fill, or ditching (CAFB, 2008).

As shown on Figure 3-1, wetland forest exists within the western and northwestern parts of Parcel D. This wetland is associated with Golf Course Creek and is bordered to the west by tidal marsh.

## 3.7 Safety and Occupational Health

The CAFB MFH area is operated in compliance with all applicable federal laws, codes, and regulations and with all applicable laws, ordinances, codes, and regulations of the State of South Carolina and Charleston County with regard to construction, health, safety, food service, water supply, sanitation, licenses and permits to do business, and all other matters.

All contractors at CAFB are responsible for following all applicable Occupational Safety and Health Administration (OSHA) regulations and for conducting their work in a manner that does not pose any risk to workers or Base personnel. Industrial hygiene responsibilities of contractors as applicable include reviewing potentially hazardous workplaces; monitoring exposure to workplace chemicals (e.g., asbestos, lead, hazardous material), physical (e.g., noise propagation), and biological (e.g., infectious waste) agents; recommending and evaluating controls (e.g., ventilation, respirators) to ensure personnel are properly protected or unexposed; and ensuring a medical surveillance program is in place to perform occupational health physicals for those workers subject to any accidental chemical exposures or engaged in hazardous waste work.

## 3.8 Air Quality

The CAA requires USEPA to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. USEPA has established



NAAQS for the following six principal pollutants, which are called criteria pollutants: carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter, and sulfur dioxide. Areas that meet the air quality standard for the criteria pollutants are designated as being “in attainment.” Areas that do not meet the air quality standard for one of the criteria pollutants may be subject to the formal rule-making process and designated as being “in nonattainment” for that standard.

CAFB is located within USEPA Air Quality Control Region IV, which generally has good air quality (CAFB, 2008). The Base is within the Charleston Intrastate Air Quality Control Region, which is classified as being in attainment with all criteria pollutants. Because CAFB is within an attainment area for all criteria pollutants, major new or modified stationary sources on and near the Base are subject to Prevention of Significant Deterioration (PSD) review to ensure that these sources are constructed without causing significant deterioration of regional air quality. A major new source is defined as one that has the potential to emit any pollutant regulated under the CAA in amounts equal to or exceeding specific major source thresholds: 100 or 250 tons/year based on the source’s industrial category.

CAFB has a Title V Air Permit issued by SCDHEC (Permit Number 560-0019) for operation of the Base solid waste incinerator (CAFB, 2008). In compliance with this permit, CAFB routinely calculates annual criteria pollutant emissions from stationary emission sources and provides this information to the State. Based on their emissions to date, bulk fuel storage areas, operations generating volatile organic compounds, paint spray booths, and bead blast units at the Base have been exempt from SCDHEC permitting requirements. Emergency generators used throughout the Base are also exempt from permitting requirements because they are operated 250 hours or less per year in addition to emergency operations. There are no requirements to routinely calculate air emissions from aircraft operations or from mobile sources such as vehicles under the State’s stationary source permitting program. There are no emission sources in the MFH area that are regulated under the CAFB Title V Air Permit.

### 3.9 Hazardous Materials and Wastes

The Environmental Restoration Program (ERP), formerly known as the Installation Restoration Program, was developed by DoD to identify, characterize, and remediate contamination from past hazardous waste disposal operations and hazardous materials spills at DoD facilities. The CAFB ERP was initiated in October 1983 and a total of 42 ERP sites have been identified to date. Of these ERP sites, 23 are currently open and eight require long-term monitoring (CH2M HILL, 2009). No ERP sites or petroleum release sites are located within the parcels to be conveyed to the PO. Sites located in the vicinity of the project parcels are discussed in detail in the 2009 Environmental Baseline Survey (EBS) for MFH Privatization at CAFB (CH2M HILL, 2009).

CAFB is permitted as a hazardous waste treatment, storage, and disposal facility under SCDHEC Permit Number SC3574460. The majority of hazardous materials used and hazardous wastes generated at the Base are associated with aircraft operations, transportation activities, and civil engineer activities (CAFB, 2003). Hazardous wastes at CAFB are controlled and managed from the point of generation to the point of ultimate disposal. Hazardous wastes are accumulated in designated satellite accumulation points

located throughout the Base and from there are transferred to the hazardous waste storage yard (Building 691).

Small quantities of hazardous substances (e.g., paints, thinners, household cleaners, household pesticides/herbicides) are stored and used by residents in the MFH area. Hazardous materials such as paints and adhesives are stored in Building 1597 (Housing Maintenance Shop) located in Parcel C. Building 1597 is a designated satellite accumulation point for hazardous waste.

There are no aboveground storage tanks (ASTs) or underground storage tanks (USTs) within the parcels to be conveyed to the PO; however, 4 ASTs are located in the vicinity of the parcels. No releases have been reported from these ASTs (CH2M HILL, 2009). There are no grease traps, OWSs, wash racks, or silver recovery systems within the project parcels (CH2M HILL, 2009).

Asbestos surveys of MFH units conducted in the late 1990's reported that asbestos-containing materials (ACMs) existed within the units sampled. Most of the ACMs identified during these surveys was non-friable ACMs within floor tiles and associated mastic (CH2M HILL, 2009). Since the late 1990's, ACM abatement has been conducted in conjunction with unit renovations; however, it cannot be ascertained that all ACMs have been abated in all existing older units.

A lead-based paint (LBP) survey of MFH units conducted in 1995 reported that the units sampled contained LBP on their exterior painted surfaces (CH2M HILL, 2009). Since the late 1990's, LBP abatement has been conducted in conjunction with unit renovations; however, it cannot be ascertained that all LBP has been abated in all existing older units.

Light ballasts containing polychlorinated biphenyls (PCBs) were once used in the MFH units at CAFB. Such light ballasts have been removed in conjunction with unit renovations; however, it cannot be ascertained whether all such light ballasts have been removed from all existing older units (CH2M HILL, 2009).

### 3.10 Cultural Resources

CAFB complies with Section 106 of the National Historic Preservation Act, which requires that federal agencies analyze the effects of federal activities on historic properties. Areas potentially affected by mission activities are surveyed as needed. CAFB also follows the principles of DoD Instruction 4710.02, *DoD Interactions with Federally-Recognized Tribes* (September 14, 2006).

The 2007 CAFB Integrated Cultural Resources Management Plan (ICRMP) provides guidance on the management of cultural resources at CAFB (CAFB, 2007b). Based on the 2007 CAFB ICRMP, the National Park Service (NPS) conducted a cultural resources survey of the Main Base housing areas (included Parcels A and B) and the Main Base Exchange areas (included Parcel C) in 1984 and Parsons Engineering Science conducted a cultural resources survey of Hunley Park (included Parcel D) in 1998. The NPS survey concluded that no archaeological sites or architectural structures eligible for listing in National Register of Historic Places (NRHP) exist in the Main Base housing areas. The Parsons Engineering Science survey identified one prehistoric archaeological site (Site 38CH1705 - ceramic

earthenware concentration) in Hunley Park (within Parcel D). This site was recommended not eligible for NRHP listing and the South Carolina Department of Archives and History concurred with this recommendation on March 20, 1998. No architectural structures in Hunley Park were determined to be eligible for NRHP listing by the Parsons Engineering Science survey.

## 3.11 Socioeconomics

### 3.11.1 Population

Table 3-2 presents the estimated populations of South Carolina and Charleston County in 2000 and 2007 (U.S. Census Bureau, 2007), and the estimated population of the City of North Charleston in 2000 and 2006 (U.S. Census Bureau, 2006). The populations of South Carolina and Charleston County increased by 9.9 percent and 10.6 percent, respectively, between 2000 and 2007. The population of the City of North Charleston increased by 7.7 percent between 2000 and 2006.

TABLE 3-2  
U.S. Census 2000, 2006, and 2007 Population Estimates  
*Environmental Assessment for Military Family Housing Privatization, Charleston AFB*

Location	2000 Population	2006 <sup>a</sup> or 2007 <sup>b</sup> Population	Percent Change
State of South Carolina	4,012,012	4,407,709 <sup>b</sup>	9.9
Charleston County	309,969	342,973 <sup>b</sup>	10.6
City of North Charleston	79,641	87,482 <sup>a</sup>	7.7

Source: U.S. Census Bureau, 2006 and U.S. Census Bureau, 2007.

CAFB currently has 3,553 active-duty military personnel (CAFB, 2009). In addition to the active-duty personnel, 2,223 AF reservists train at the Base and 962 civilians work at the Base.

### 3.11.2 Housing

In 2006, Charleston County had a total of 164,788 housing units, of which 137,878 (83.7 percent) were occupied (U.S. Census Bureau, 2006b). The City of North Charleston had a total of 38,425 housing units in 2006, of which 32,438 (84.4 percent) were occupied. In 2006, most of the housing units in Charleston County were owner occupied and most of the housing units in the City of North Charleston were renter occupied.

The existing MFH at CAFB is discussed in Section 1.1.3. The MFH area is currently operated and maintained by CAFB. Approximately 66 percent of the total 723 housing units in the MFH area are currently occupied. Military personnel pay their rent from their individual basic allowance for housing.

### 3.11.3 Economy

In 2006, Charleston County had a civilian labor force of 174,162 persons, of whom 164,456 (94.4 percent) were employed (U.S. Census Bureau, 2006b). In 2006, the City of North Charleston had a civilian labor force of 40,254, of whom 37,071 (92.1 percent) were employed. In 2006, the mean household income was \$46,653 in Charleston County and \$34,296 in the City of North Charleston. The economic impact of CAFB on local communities in Fiscal Year (FY) 2007 was more than \$784.4 million (CAFB, 2009). In FY 2007, the 437<sup>th</sup> AW had a payroll of \$241.9 million and the 315<sup>th</sup> AW had a payroll of \$40.8 million.

## 3.12 Community Resources

### 3.12.1 Schools

Public schools in the City of North Charleston are under the jurisdiction of the Charleston County School District, which is the second largest school district in South Carolina. Children that live in the MFH area at CAFB attend the following schools: Hunley Park Elementary School, Lambs Elementary School, Morningside Middle School, and North Charleston High School. The Jerry Zucker Middle School of Science, which is scheduled to open in the 2009-2010 school year, will also be available to children living in the MFH area.

### 3.12.2 Recreation

The following recreational features exist within the project parcels: a jogging trail in Parcel A, 4 playgrounds in Parcel B, 5 playgrounds in Parcel D, and the Residential Recreation Building (Building 4450) in Parcel D (see Figure 2-1). The jogging trail runs through portions of Parcel A as well as outside the boundaries of the parcel. Playgrounds, athletic fields, and athletic courts also exist in the immediate vicinity of the project parcels. The CAFB golf course is located adjacent to the northern boundary of Parcel A. Natural areas within and in the vicinity of the parcels, which include the upland forest in and around Parcel C and the wetland forest in and around Parcel D, provide nature viewing opportunities such as bird watching. Recreational facilities at CAFB are restricted to military personnel and DoD civilians.

### 3.12.3 Emergency Services

The 437<sup>th</sup> AW provides medical support to 437 AW units, tenant organizations, and the CAFB community. The Base medical supply storage building (Building 1001) is located adjacent to the southeastern boundary of Parcel A. The Base medical/dental clinic (Building 364) is located at the corner of Arthur Drive and Hill Boulevard.

Police and fire fighting services for the MFH area are provided by CAFB. The Fire Rescue Headquarters is located on the airfield, and a fire station (Building 3003) is located within Parcel D. The Security Forces Squadron headquarters is located at the intersection of Hill Boulevard and McCaw Street.

## 3.13 Environmental Justice and Protection of Children

### 3.13.1 Environmental Justice

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. “Fair treatment” means that no group, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the adverse environmental consequences resulting from industrial, municipal, or commercial operations or the execution of federal, state, local, and tribal programs and policies.

In February 1994, President Clinton issued EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (59 Federal Register [FR] 7629). This order directs federal agencies to incorporate environmental justice as part of their missions. Federal agencies are specifically directed to identify and, as appropriate, to address disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations. CEQ has issued guidance to federal agencies to assist them with their NEPA procedures so that environmental justice concerns are effectively identified and addressed (CEQ, 1997).

The U.S. 2000 Census was used to determine the low-income and minority population characteristics of the area. U.S. Census data on minority and low-income populations are reported every 10 years with each decennial census. Census data are reported for a variety of geographic areas depending on availability of data. For purposes of environmental justice calculations, the largest geographic area is the Census Tract (CT), which can range in size from several to many miles depending on the density of the local population. Each CT consists of several Block Groups (BGs). Each BG in turn consists of multiple Blocks, which sometimes coincide with geographies as small as a city block or several acres of land area.

The population of the MFH area consists entirely of military personnel and their families. No minority or low-income populations currently live or will live in the future at CAFB. Therefore, environmental justice is analyzed in this EA for the minority and low-income populations that live in the immediate vicinity of the parcels to be conveyed to the PO under the Proposed Action. CTs 26.10, 31.08, 31.09, and 31.10 are located adjacent to the project parcels. Table 3-3 presents the 2000 Census minority and poverty data for these CTs as well as for Charleston County and South Carolina (U.S. Census Bureau, 2000).

As indicated in Table 3-3, the percentages of minorities in the populations of Charleston County and South Carolina in 2000 were 36.6 percent and 28.4 percent, respectively. Among the CTs adjacent to the project parcels, three had greater minority percentages (CTs 31.08, 31.09, and 31.10) and one had a lower minority percentage (CT 26.10) than did Charleston County or South Carolina. In 2000, 16.4 percent of the population of Charleston County and 14.1 percent of the population of South Carolina were below the poverty level. The poverty level percentages of CT 26.10 (16.0 percent) and CT 31.10 (16.6 percent) were relatively comparable to that of Charleston County. The poverty level percentages of CT 31.08 (11.4 percent) and CT 31.09 (6.2 percent) were below those of both Charleston County and South Carolina.

TABLE 3-3

U.S. Census 2000 Minority and Poverty Data

*Environmental Assessment for Military Family Housing Privatization, Charleston AFB*

Population	CT 26.10	CT 31.08	CT 31.09	CT 31.10	Charleston County	South Carolina
Total population	350	1921	3430	6436	309,969	4,012,012
Percentage of minorities in population <sup>a</sup>	23.1%	54.3%	39.9%	48.8%	36.6%	28.4%
Percentage of population below poverty level <sup>b</sup>	16.0%	11.4%	6.2%	16.6%	16.4%	14.1%

Source: U.S. Census Bureau, 2000

<sup>a</sup> Minorities includes persons who identify themselves as black (African-American), Asian or Pacific Islander, Native American or Alaskan Native, or Hispanic. The 2000 Census definition of Hispanic or Latino are individuals who classify themselves in one of the specific Hispanic or Latino categories such as "Mexican," Puerto Rican," or "Cuban," as well as those who indicate that they are "other Spanish, Hispanic, or Latino." Origin can be viewed as the heritage, nationality group, lineage, or country of birth of the person or the person's parents or ancestors before arrival in the United States. People who identify their origin as Spanish, Hispanic, or Latino may be of any race.

<sup>b</sup> Based on 48 poverty threshold variables used by the U.S. Bureau of the Census, including income, family size, number of family members under the age of 18 and over 65 years of age, and amount spent on food. Poverty data is based on different total population than rest of table.

### 3.13.2 Protection of Children

Guidelines for the protection of children are specified in EO 13045, *Protection of Children from Environmental Health Risks and Safety Risk* (FR: 23 April 1997, Volume 62, Number 78). This EO requires that federal agencies make it a high priority to identify and assess environmental health and safety risks that may disproportionately affect children, and ensure that policies, programs, and standards address disproportionate risks to children that result from environmental health or safety risks.

The population of the MFH area consists entirely of military personnel and their families. Many of the military families that live in the MFH area include children under the age of 18. In 2000, 27.4 percent of the combined population of the CTs located adjacent to the project parcels were children under the age of 18 (U.S. Census Bureau, 2000).

## 3.14 Traffic Flow

The primary roadways near CAFB are Interstates 26 and 526, U.S. Highways 78 and 52, and State Road 642. There are two primary entrances into CAFB: Rivers Gate and Dorchester Gate. Rivers Gate is on Arthur Drive, northwest of the Runway 15 threshold. Arthur Drive serves as the primary north-south corridor through the Base. Dorchester Gate is on the western side of CAFB at the intersection of Dorchester Road (State Road 642) and Hill Boulevard. Hill Boulevard serves as the primary east-west corridor through the Base.

Parcels A and B can be accessed from several roads originating off of Hill Boulevard as well as from other roads (see Figure 2-1). Parcel C can be accessed from South O'Neal Avenue off of Hill Boulevard and from Hutchinson Avenue which connects the parcel to Parcel B. Parcel D is accessed from Maryland Avenue off of Dorchester Road. A guard shack

(Building 3902) and security gate are located at the entrance on Maryland Avenue. Parking areas within the project parcels includes MFH unit parking space and common parking areas next to some of the recreational facilities.

## **3.15 Utility Infrastructure**

### **3.15.1 Water Supply**

Charleston Water Systems supplies potable water to CAFB. The water is obtained primarily from the Bushy Park Reservoir and Edisto River, and is treated at the Hanahan Water Treatment Plant. The potable water system at CAFB consists of five water mains, a network of distribution lines, and three storage tanks. Water pressure at the Base is adequate and the Base water demand is approximately 60 percent of the total capacity of the system (CAFB, 2003).

The water distribution system that serves Parcels A, B, and C is a looped system that also serves other areas of the Base. Parcels A, B, and C receive water via lines connected to a 12-inch water main that runs parallel to Hill Boulevard. Parcel D receives water via lines connected to an 8-inch water main that runs parallel to Dorchester Road.

### **3.15.2 Wastewater Treatment**

All sanitary and most industrial wastewater generated at CAFB is discharged to the North Charleston Sewer District for treatment at the Felix C. Davis Wastewater Treatment Plant. The sanitary sewer system at CAFB consists of two sewer mains, a network of sewer lines, and seven lift stations. The Base sewer demand is approximately 65 percent of the total capacity of the system (CAFB, 2003). The sewer mains run parallel to each other under Hill Boulevard. The project parcels are serviced by sewer lines connected to the sewer mains and by four lift stations.

### **3.15.3 Energy**

The South Carolina Public Service Authority (Santee-Cooper) supplies electricity to CAFB. The main substation at CAFB is located in the western part of the Base at the end of Hill Boulevard and Dorchester Road. The main substation is equipped with two transformers and a metering device, and is fed by Santee-Cooper through a 115-kilovolt power line. The Base circuits are used at full capacity to satisfy Base electrical demand (CAFB, 2003). A network of underground and aboveground electrical distribution lines services the Base. The project parcels are serviced by aboveground electrical lines.

The natural gas system at CAFB is privatized. It is owned, operated, and maintained by the South Carolina Electric and Gas Company (SCE&G). SCE&G supplies natural gas to CAFB via a 6-inch line that enters the Base at a metering point near the Dorchester Gate. The Base natural gas distribution system adequately meets Base demand (CAFB, 2003). Within the project parcels, only SOQ units in Parcel A have natural gas service.

Within the project parcels, most of the MFH units have geothermal heat pumps. Two or three geothermal wells exist in the backyards of most of the MFH units as well as in the former backyards of units that have been demolished. A project has been awarded to cap all geothermal wells associated with pre-privatization MFH demolitions.



### **3.15.4 Solid Waste Management**

Solid waste that is generated at CAFB is collected and transported to an off-base landfill by a private contractor. No landfills are in operation at the Base. Solid waste from aircraft arriving from overseas is handled in accordance with a U.S. Department of Agriculture compliance agreement that comports with CFR requirements for regulated garbage.

Biohazardous waste generated by the Medical Group is transported off-base and incinerated at permitted facilities. CAFB encourages voluntary recycling of newspaper, plastics, and glass and Charleston County recycling bins for these materials are located throughout the Base.

### **3.15.5 Stormwater Management**

CAFB has an extensive stormwater collection system that consists of open drainage swales and underground storm sewers that discharge to culverts and pipes (CAFB 2007). During rain events, inlets in paved areas and roadways collect stormwater runoff from industrial and developed portions of the base. Runoff from the unpaved areas is generally routed into open drainage channels. Irrigation waters, hydrant flushings, potable water piping repair flushings, and various other non-stormwater runoff are discharged to the stormwater system, but account for only a small fraction of the total flow. No super-chlorination is conducted on water that is flushed from repaired piping or fire hydrants. All flushed water is within drinking water standards for chlorine levels.

### **3.15.6 Telecommunications**

The general telephone system at CAFB is owned and operated by Southern Bell. CAFB also has a secured-line telephone system that is operated only by Base personnel. The computer network is owned and operated by CAFB and the cable television system is owned and operated by Comcast.

## 4.0 Environmental Consequences

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### 4.1 Land Use

#### 4.1.1 Privatization Alternative

The land use classifications of the project parcels would not be changed by the Proposed Action. The proposed construction/demolition of MFH units and construction of recreational/community features under the Proposed Action would occur entirely within areas designated as family housing land use and would not directly or indirectly affect the portions of the parcels designated as open space land use. Adjacent land uses and land uses in the surrounding region would also not be affected in any manner by the Proposed Action.

#### 4.1.2 No-Action Alternative

Under the No-Action Alternative, CAFB would retain control and management of its MFH units and associated infrastructure/utilities. There would be no construction/demolition of housing units or construction of any new community/recreational features within the MFH area. Therefore, the No-Action Alternative would have no effect on land use.

### 4.2 Noise

#### 4.2.1 Privatization Alternative

Under the Proposed Action, construction/demolition activities would temporarily increase ambient noise levels in and around the project parcels. As discussed in Section 3-2, typical construction work generates noise levels in the range of 78 to 89 dBA approximately 50 feet from the construction area. Therefore, noise generated during construction/demolition activities under the Proposed Action would at times be above 65 dBA, which is generally considered the maximum acceptable noise level for most residential land uses. Some residents living in Parcels A, B, and D would be temporarily impacted by noise generated from construction/demolition of housing units, depending on the location of the activity. Noise generated from construction of new community/recreational features has the potential to temporarily impact residents living in all the project parcels as well as those living in the community located south of Parcel D and west of Parcel C, depending on the location of the activity. The overall impact that construction/demolition noise would have on residents would be minor because the increased noise levels would be intermittent and limited to normal working hours and the overall construction period. Construction workers would use hearing protection and would follow OSHA standards and procedures.

#### 4.2.2 No-Action Alternative

Under the No-Action Alternative, no construction/demolition activities would occur. Therefore, the No-Action Alternative would have no noise-related effects.

## 4.3 Geology, Topography, and Soils

### 4.3.1 Privatization Alternative

The Proposed Action would not involve any intrusive construction activity that would affect subsurface geological formations. Construction and demolition activities under the Proposed Action would have a negligible impact on topography and a minor impact on soils. No significant land contouring would be required because the project parcels have relatively flat topography and they have been previously graded. Grading to prepare sites for new construction is expected to have negligible impacts on site topography.

The construction of new community/recreational features under the Proposed Action has the potential to directly impact soils, depending on the type of feature that is constructed. The overall direct impact on soils from the construction of new community/recreational features would be minor because most of the soils in the project parcels have been previously disturbed. Moreover, soils within the construction footprints of some features such as ballfields would not be permanently displaced, only temporarily impacted during construction.

Soil disturbance during construction/demolition activities could also result in increased erosion potential from loss of ground cover and exposure of bare soils to precipitation and runoff. Potential impacts to water quality from these factors are discussed in Section 4.5. Potential indirect impacts to surrounding soils would be controlled and avoided through the use of appropriate best management practices (BMPs) during construction and soil stabilization/revegetation measures during and after construction, which may include, but would not be limited to the following:

- Sediment barriers (silt fences and/or hay bales)
- Temporary detention basins
- Grade stabilization with seed and mulch
- Geotextile slope stabilization

The summer months experience the heaviest rainfall and April and November are historically the driest months of the year at AFB. Because the dry months are separated in time, it would not be possible to time construction/demolition activities to occur in the drier months, when runoff amounts would be less and the potential for erosion impacts would be reduced.

The PO would obtain a SCDHEC NPDES General Permit for Stormwater Discharges from Construction Activities and would implement an associated SWPPP. The BMPs and soil stabilization/revegetation measures that would be implemented as part of the SWPPP would be in accordance with guidance provided in the South Carolina Stormwater Management and Sediment Control Handbook for Land Disturbance Activities.

### 4.3.2 No-Action Alternative

Under the No-Action Alternative, no construction/demolition activities would occur. Therefore, the No-Action Alternative would have no effect on geomorphology or soils.

## 4.4 Hydrology

### 4.4.1 Groundwater

#### 4.4.1.1 Privatization Alternative

Construction and demolition activities under the Proposed Action may have a negligible, temporary impact on the surficial groundwater table. Little or no dewatering is expected to be required during construction/demolition. The Proposed Action would not involve withdrawals from, or discharges to, groundwater.

#### 4.4.1.2 No-Action Alternative

Under the No-Action Alternative, no construction/demolition activities would occur. Therefore, the No-Action Alternative would have no effect on groundwater.

### 4.4.2 Surface Water

#### 4.4.2.1 Privatization Alternative

As discussed in Section 3.4.2 and shown on Figure 3-1, Golf Course Creek runs adjacent to the northern and western boundaries of Parcel D and an unnamed stream flows through Parcel C. Construction/demolition activities under the Proposed Action would not occur within these surface waters and the Proposed Action would not involve withdrawals from, or discharges to, these surface waters. Measures that would be taken to prevent indirect impacts to the water quality of these surface waters are discussed in Section 4.5.

Although the change in impervious area within the project parcels that would result from implementation of the Proposed Action cannot be quantified at this time, the amount of impervious area is expected to decrease in Parcels B and D, and increase in the other project parcels. The construction of new recreational/community features, which could occur in any of the project parcels under the Proposed Action, would result in an increase in impervious area. However, even if all of the features being considered by the AF were constructed, the increase in impervious area would be minor relative to the total area of the parcels. Impervious area would be reduced in Parcels B and D under the Proposed Action through the demolition of housing units. The increase in impervious area that would result from construction of new recreational/community features in Parcels B and D is expected to be less than the decrease in impervious area that would result from unit demolitions in these parcels.

The change in impervious area within the project parcels is expected to have a negligible effect on stormwater infiltration and runoff volume. The PO would be required to comply with SCDHEC regulations regarding post-development stormwater runoff. Per SCDHEC regulations, post-development peak discharge rates may not exceed predevelopment peak discharge rates for 2- and 10-year, 24-hour storm events (Stormwaterauthority.org, 2008). Implementation of appropriate post-development stormwater controls by the PO per SCDHEC regulations would prevent increases in runoff from the project parcels.

#### 4.4.2.2 No-Action Alternative

Under the No-Action Alternative, no construction/demolition activities would occur. Therefore, the No-Action Alternative would have no effect on surface water.

### 4.4.3 Floodplains

#### 4.4.3.1 Privatization Alternative

Privatization of AF property that contains floodplains is required to be conducted in accordance with EO 11988, *Floodplain Management*, which directs Federal agencies to avoid, to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative. As discussed in Section 3.4.3 and shown on Figure 3-1, 100-year floodplain is located adjacent to the western and northwestern boundaries of Parcel D and a small portion of the floodplain is located within the parcel boundary.

In accordance with EO 11988, Section 3(d), the lease agreement with the PO would require: 1) reference to restricted uses of the property under Federal, State, and local floodplain regulations; 2) reference to other appropriate restrictions on use of the property; or 3) withholding the defined floodplain acreage from the lease. Assuming that the portion of Parcel D that is floodplain is part of the leased property, the PO would be restricted from constructing within the floodplain or impacting the floodplain in any other way unless there is no practicable alternative to do otherwise. Developable space is available outside the floodplain area within Parcel D and, therefore, new community/recreational features could be constructed within Parcel D by the PO, if desired, without impacting the floodplain. As such, the Proposed Action is expected to have no effect on floodplains. Any proposal by the PO to directly or indirectly impact the floodplain would require separate NEPA documentation with a supporting Finding of No Practicable Alternative (FONPA) in accordance with EO 11988, Section 2(a)(2), as well as appropriate mitigation if required.

#### 4.4.3.2 No-Action Alternative

Under the No-Action Alternative, no construction/demolition activities would occur. Therefore, the No-Action Alternative would have no effect on floodplains.

## 4.5 Water Quality

### 4.5.1 Privatization Alternative

Under the Proposed Action, minor temporary impacts to water quality could result from construction/demolition activities that cause soil disturbance and exposed soil, which would create the possibility for downslope transport of sediment and soil-bound pollutants via stormwater runoff into Golf Course Creek and/or the unnamed stream within Parcel C. Potential water quality impacts would be temporary and would be minimized through the use of appropriate BMPs during construction and soil stabilization/revegetation measures during and after construction, as discussed in Section 4.3.1. The PO would obtain a SCDHEC NPDES General Permit for Stormwater Discharges from Construction Activities and would implement an associated SWPPP. The BMPs and soil stabilization/revegetation

measures that would be implemented as part of the SWPPP would be in accordance with guidance provided in the South Carolina Stormwater Management and Sediment Control Handbook for Land Disturbance Activities.

As discussed in Section 4.4.1, the change in impervious area within the project parcels is expected to have a negligible effect on stormwater runoff volume and the PO would implement appropriate post-development stormwater controls per SCDHEC regulations to prevent increases in runoff from the project parcels.

#### **4.5.2 No-Action Alternative**

Under the No-Action Alternative, no construction/demolition activities would occur. Therefore, the No-Action Alternative would have no effect on water quality.

### **4.6 Biological Resources**

#### **4.6.1 Vegetation**

##### **4.6.1.1 Privatization Alternative**

Under the Proposed Action, construction/demolition activities would have a minor impact on vegetation within the project parcels, which consists primarily of maintained lawns, landscaping vegetation, and scattered trees. Impacts to vegetation would be limited to the immediate construction/demolition areas and the areas would be revegetated after construction/demolition is completed. Because large trees are desired as amenity features, they would be preserved as much as possible. The Proposed Action is expected to have no impact on the upland forest that exists in the northern part of Parcel C because of the desire to preserve natural areas at the Base.

##### **4.6.1.2 No-Action Alternative**

Under the No-Action Alternative, no construction/demolition activities would occur. Therefore, the No-Action Alternative would have no effect on vegetation.

#### **4.6.2 Wildlife**

##### **4.6.2.1 Privatization Alternative**

Under the Proposed Action, construction/demolition activities would have a minor impact on wildlife within the project parcels, which is restricted primarily to those species adapted to a suburban environment. The establishment and operation of construction staging areas, as well as general construction noise, may temporarily disturb common wildlife species that occur in the project parcels. Any disturbance experienced by common wildlife species would be limited to the construction period and is expected to be minor. The potential for incidental animal mortality occurring during construction/demolition exists but is considered to be low and any losses would not seriously affect regional animal population levels. The Proposed Action is not expected to displace the wildlife habitat that is provided by the upland forest that exists in the northern part of Parcel C because of the desire to maintain natural areas at the Base.



#### 4.6.2.2 No-Action Alternative

Under the No-Action Alternative, no construction/demolition activities would occur. Therefore, the No-Action Alternative would have no effect on wildlife.

### 4.6.3 Sensitive Species

#### 4.6.3.1 Privatization Alternative

As discussed in Section 3.6.3, portions of the project parcels provide suitable habitat for two Federal Species of Concern, the painted bunting and the loggerhead shrike. The upland forest located in the northern part of Parcel C provides suitable habitat for the painted bunting and mowed/maintained portions of the parcels provide suitable habitat for the loggerhead shrike. Under the Proposed Action, noise generated by construction/demolition activities has the potential to disturb these two species if they are present in the project parcels. Any disturbance experienced by these species would be limited to the construction period and is expected to be minor given that they would be accustomed to high noise levels if they occur at the Base. Because of their mobility, there would be negligible potential for incidental mortality during construction/demolition.

In a response letter dated August 24, 2009, USFWS stated that it concurs with the determination by the Air Force that the Proposed Action is not likely to adversely affect federally listed species (see Appendix A).

#### 4.6.3.2 No-Action Alternative

Under the No-Action Alternative, no construction/demolition activities would occur. Therefore, the No-Action Alternative would have no effect on sensitive species.

### 4.6.4 Wetlands

#### 4.6.4.1 Privatization Alternative

Privatization of AF property that contains wetlands is required to be conducted in accordance with EO 11990, *Protection of Wetlands*, which directs Federal agencies to avoid, to the extent possible, the long and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative. As discussed in Section 3.6.4 and shown on Figure 3-1, wetland forest exists within the western and northwestern parts of Parcel D.

In accordance with EO 11990, Section 4, the lease agreement with the PO would require: 1) reference to restricted uses of the property under Federal, State, and local wetland regulations; 2) reference to other appropriate restrictions on use of the property; or 3) withholding the defined wetland acreage from the lease. Assuming that the portion of Parcel D that is wetland is part of the leased property, the PO would be restricted from constructing within the wetland or impacting the wetland in any other way unless there is no practicable alternative to do otherwise. Developable space is available outside the wetland within Parcel D and, therefore, new community/recreational features could be constructed within Parcel D by the PO, if desired, without impacting the wetland. As such, the Proposed Action is expected to have no effect on wetlands. Any proposal by the PO to

directly or indirectly impact the wetland would require separate NEPA documentation with a supporting FONPA in accordance with EO 11990, Section 2(a)(1), as well appropriate mitigation if required.

#### **4.6.4.2 No-Action Alternative**

Under the No-Action Alternative, no construction/demolition activities would occur. Therefore, the No-Action Alternative would have no effect on wetlands.

## **4.7 Safety and Occupational Health**

### **4.7.1 Privatization Alternative**

Under the Proposed Action, there is the potential for worker accidents to occur during construction/demolition activities as a result of routine workplace exposure to heavy equipment and debris. As discussed in Section 3.9, ACMs, LBP, and light ballasts containing PCBs may still exist in some of the older housing units; therefore, there is the potential for workplace exposure to these materials during demolition work. To minimize the potential for accidents and exposure to ACMs, LBP, and PCBs, workers would wear and use appropriate protective equipment and would follow all applicable OSHA standards and procedures. Job Safety Assessments would be prepared, and workers would review and sign these documents before working on the job site. Construction/demolition contractors would be responsible for ensuring that all their employees (and subcontractors) comply with all applicable OSHA regulations and for conducting their work in a manner that does not pose any risk to themselves or to Base personnel. Provided that all appropriate worker protection measures are taken and all applicable OSHA regulations and guidelines are followed, the potential for safety and occupational health impacts under the Proposed Action would be low.

### **4.7.2 No-Action Alternative**

Under the No-Action Alternative, no construction/demolition activities would occur. Therefore, the No-Action Alternative would have no effect on safety and occupational health.

## **4.8 Air Quality**

### **4.8.1 Privatization Alternative**

Construction and demolition activities under the Proposed Action would result in short-term, minor impacts to air quality. Fugitive dust (particulate matter) and construction vehicle exhaust emissions would be generated during construction/demolition and would vary daily, depending on the level and type of work conducted.

Fugitive dust would be generated by construction vehicle and equipment travel on dirt surfaces and by wind action on stockpiled materials. The primary risks from blowing dust particles relate to human health and human nuisance values. Fugitive dust from stockpiled materials would consist primarily of nontoxic particulate matter; however, fugitive dust can contribute to respiratory health problems and create an inhospitable working environment.

Deposition on surfaces can be a nuisance to those living or working downwind. Measures that would be implemented to reduce or eliminate fugitive dust emissions would include the following:

- *Sprinkling/Irrigation.* Sprinkling the ground surface with water until it is moist is an effective dust control method for haul roads and other traffic routes (Smolen et al., 1988). This practice can be applied to almost any site. When suppression methods involving water are used, care would be exercised to minimize over-watering which could cause the transport of mud onto adjoining roadways, ultimately increasing the dust problem.
- *Vegetative Cover.* In areas not expected to handle vehicle traffic, vegetative stabilization of disturbed soil is often desirable. Vegetation provides coverage to surface soils and slows wind velocity at the ground surface, thereby reducing the potential for dust to become airborne.
- *Mulch.* Mulching can be a quick and effective means of dust control for recently disturbed areas.

Pollutants that would be emitted from the internal combustion engine exhausts of construction vehicles and equipment include carbon monoxide, nitrogen oxide, particulate matter, and volatile organic compounds. These types of exhaust emissions would be temporary, and at their expected generation levels, would not significantly impact air quality. Fugitive dust and exhaust emissions from the proposed construction/demolition activities would not collectively represent a new major source of air emission that would require modification to the Title V Air Permit under which CAFB operates.

Under the Proposed Action, the elimination of old existing housing units and the construction of new housing units that have more efficient heating/cooling systems would have a minor long-term positive impact on air quality.

#### 4.8.2 No-Action Alternative

Under the No-Action Alternative, no construction/demolition activities would occur. Therefore, the No-Action Alternative would have no effect on air quality.

### 4.9 Hazardous Materials and Wastes

#### 4.9.1 Privatization Alternative

Construction/demolition activities under the Proposed Action would be conducted by the PO in accordance with all applicable state and federal environmental compliance regulations. As discussed in Section 3.9, there are no ERP sites, petroleum release sites, ASTs, USTs, grease traps, OWSs, wash racks, or silver recovery systems within the parcels to be conveyed to the PO.

Under the Proposed Action, there would be no change in the types of activities conducted in the privatized housing area following construction/demolition. Small quantities of hazardous substances (e.g., paints, thinners, household cleaners, household pesticides/herbicides) would continue to be stored and used by residents in the housing area. Hazardous materials such as paints and adhesives would continue to be stored in

Building 1597 (Housing Maintenance Shop) located in Parcel C and the PO would be responsible for proper management of the hazardous materials in the building and the wastes generated.

The PO would conduct comprehensive ACM, LBP, and PCB surveys of the housing units to be demolished. Necessary ACM abatement, LBP abatement, and/or removal of light ballasts containing PCBs would be conducted prior to demolition in accordance with all applicable state and federal regulations. The State would be notified prior to demolition of housing units. A completed written notice form, "Asbestos Abatement Project License Application," would be submitted to SCDHEC at least 10 working days prior to initiation of any asbestos abatement (SCDHEC, 2008).

To minimize the potential for exposure to ACMs, LBP, and PCBs, workers would wear and use appropriate protective equipment and would follow all applicable OSHA standards and procedures during any removal, handling, and disposal. The risk of exposure to ACMs, LBP, and/or PCBs would be restricted to the duration of the demolition work and the potential for any health impacts would be low if all appropriate worker protection measures are taken and all applicable OSHA regulations and guidelines are followed.

#### **4.9.2 No-Action Alternative**

Under the No-Action Alternative, no construction/demolition activities would occur. Therefore, the No-Action Alternative would have no effect on, or from, hazardous materials and waste.

### **4.10 Cultural Resources**

#### **4.10.1 Privatization Alternative**

As discussed in Section 3-10, past surveys have concluded that the project parcels do not contain any architectural structures that are listed, or are eligible for listing, in the NRHP. One prehistoric archaeological site was discovered in Parcel D in 1998; however, it was determined to not be eligible for NRHP listing. As such, the Proposed Action is not expected to impact cultural resources. In the event that any archaeological or human remains are discovered during construction/demolition activities, the standard operating procedures that apply to the inadvertent discovery of archaeological or human remains outlined in the CAFB ICRMP would be implemented.

In a response letter dated August 19, 2009, SHPO stated that it concurs with the determination by the Air Force that the Proposed Action would not affect any properties listed, or are eligible for listing, in the NRHP (see Appendix A).

#### **4.10.2 No-Action Alternative**

Under the No-Action Alternative, no construction/demolition activities would occur. Therefore, the No-Action Alternative would have no effect on cultural resources.

## 4.11 Socioeconomics

### 4.11.1 Privatization Alternative

Under the Proposed Action, available MFH at CAFB would decrease by 378 units; however, the number of units that would be eliminated has been determined by the AF to be surplus that is not required to meet MFH needs at the Base. Therefore, the Proposed Action would not negatively impact the housing needs of military families at CAFB and would not change the number of persons living in the MFH area or surrounding area. The housing units proposed to be eliminated are old and do not meet current DoD housing standards; therefore, their elimination under the Proposed Action would improve the overall quality of available housing at the Base. The construction of 118 new housing units in Parcel B under the Proposed Action would also have a positive impact on the quality of housing at CAFB.

Under the Proposed Action, the AF would realize long-term economic savings by transferring the long-term management of MFH at CAFB to the private sector. The private sector would benefit economically by taking over the management of the housing; however, there would be no appreciable increase in housing operation and maintenance positions as these positions are already held by civilian contract personnel.

Construction and demolition work would have a minor, short-term, positive impact on the local economy. Direct expenditures for construction-related materials would benefit local suppliers and secondary spending by workers would benefit businesses near CAFB such as gas stations and restaurants. Construction and demolition work would have a negligible impact on the total labor force and employment in the region as a result of the small number of jobs that would be created. Any increase in employment would be temporary and relatively small.

### 4.11.2 No-Action Alternative

Under the No-Action Alternative, CAFB would continue to have an excess of housing units and housing units that do not meet current DoD housing standards. The No-Action Alternative would also prevent the AF from reducing costs associated with long-term management of MFH at CAFB.

## 4.12 Community Resources

### 4.12.1 Privatization Alternative

The Proposed Action would not change the number of persons living in the MFH area or surrounding area. Therefore, local schools would not experience a change in the enrollment numbers of children belonging to military families under the Proposed Action.

As discussed in Section 2-1, several new community/recreational features would be constructed in the project parcels by the PO under the Proposed Action. Therefore, the Proposed Action would have a positive impact on the recreational value of the MFH area and the quality of life of the residents.

CAFB would continue to provide medical, police, and fire-fighting services to the MFH area following privatization. Because the Proposed Action would not change the number of

persons living in the MFH area, the demand for these services would remain at current levels.

#### **4.12.2 No-Action Alternative**

Under the No-Action Alternative, new community/recreational features would not be constructed in the MFH area. The No-Action Alternative would have no effect on schools or medical, police, or firefighting services.

### **4.13 Environmental Justice and Protection of Children**

#### **4.13.1 Privatization Alternative**

Under the Proposed Action, construction and demolition activities would have only minor impacts associated with the resources most relevant for assessing impacts on human populations, which are air quality, noise, groundwater, surface water, and hazardous materials/wastes. The minor impacts that construction and demolition activities would have on these resources would not adversely affect human populations. Therefore, the Proposed Action would not have disproportionately high or adverse human health or environmental effects on minority or low-income populations. Construction areas would be secured against unauthorized entry; therefore, the Proposed Action would not result in environmental health or safety risks to children.

#### **4.13.2 No-Action Alternative**

Under the No-Action Alternative, no construction/demolition activities would occur. Therefore, the No-Action Alternative would have no effect on environmental justice or protection of children.

### **4.14 Traffic Flow**

#### **4.14.1 Privatization Alternative**

The Proposed Action would not change the number of persons living in the MFH area or surrounding area. Therefore, there would be no permanent change in traffic levels at CAFB or in the surrounding area under the Proposed Action.

Under the Proposed Action, construction and demolition work would temporarily increase traffic at CAFB and in the surrounding area. The projected increase in traffic is expected to be minor and traffic levels would return to current levels after the construction/demolition work is completed. The Proposed Action would not involve modifications to the existing road system of CAFB or the surrounding area. The PO would be responsible for maintaining the road system within the project parcels.

#### **4.14.2 No-Action Alternative**

Under the No-Action Alternative, no construction/demolition activities would occur. Therefore, the No-Action Alternative would have no effect on traffic flow.



## 4.15 Utility Infrastructure

### 4.15.1 Privatization Alternative

Under the Proposed Action, certain utilities that exclusively serve MFH area would be conveyed to the PO. Utilities to be conveyed to the PO include electricity, water (excluding water mains in Parcels A, B, and C), sewer (excluding sewer mains), and storm drainage. Utility infrastructure that serves facilities outside the MFH area such as water mains, sewer mains, and telecommunication lines, as well as utility infrastructure that has already been privatized such as the natural gas system, would not be conveyed to the PO.

Under the Proposed Action, the PO would own and manage the utilities that are conveyed and the respective utility providers would continue to provide service. Therefore, the Proposed Action would have no effect on the utility service that is provided to the MFH area. The PO would be responsible for installing any new connecting utility lines for new community/recreational features if the features are constructed away from existing utility lines.

As discussed in Section 3.15.3, most of the MFH units within the project parcels have geothermal heat pumps. Two or three geothermal wells exist in the backyards of most of the MFH units as well as in the former backyards of units that have been demolished. The lease agreement with the PO may include a government buyout clause for malfunctioning geothermal heat pumps and the AF may create a reserve account for abandoning geothermal wells in the project parcels.

Because the Proposed Action would not change the number of persons living in the MFH area, there would be no change in energy and potable water consumption or wastewater and solid waste generation in the MFH area under the Proposed Action.

### 4.15.2 No-Action Alternative

Under the No-Action Alternative, there would be no change in the ownership and management of utilities that serve the MFH area. Therefore, the No-Action Alternative would have no effect on utilities.

## 4.16 Cumulative Impacts

The most severe environmental impacts may not result from the direct effects of any particular action, but from the combination of effects of multiple, independent actions over time. As defined in 40 CFR 1508.7, a cumulative impact is the “impact on the environment which results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions.” Principles of cumulative impacts analysis are described in the CEQ guide, *Considering Cumulative Effects under the National Environmental Policy Act* (CEQ, 2007).

This section addresses the potential for cumulative impacts resulting from interaction of the Proposed Action with other past, present and reasonably foreseeable actions occurring at CAFB and in the surrounding community at large.

#### 4.16.1 Privatization Alternative

The primary actions that have occurred within and in the vicinity of the project parcels within the last five years have been MFH unit demolition, renovation, and construction. Numerous old housing units throughout the MFH area were demolished in phases during this period. All the units in Parcel D were renovated in 2004 and 10 SOQ units were constructed in Parcel A in 2007. These actions had relatively minor impacts on the environment and have collectively improved the MFH area. The coupling of the Proposed Action with past housing unit demolition, renovation, and construction would have positive cumulative impacts on the infrastructure of the MFH area and the quality of life of the residents.

The Proposed Action would be limited to the four project parcels that would be conveyed to the PO. The Proposed Action would occur entirely within the boundaries of CAFB and is expected to have little potential to interact with any private sector projects in the surrounding area. Two parcels within the MFH area that are not part of the Proposed Action (Main Base Exchange North and Hunley Park North) may be privatized separately through an Enhanced Use Lease (EUL). The EUL initiative is separate from the Military Housing Privatization Initiative (MHPI) under which the Proposed Action is being implemented. The timetable for EUL implementation is yet to be determined and future land use options for the parcels have yet to be defined. As such, the combined effects of the Proposed Action and EUL cannot be assessed at this time. Separate EIAP documentation that will be prepared for the EUL will assess the potential direct and cumulative impacts of the action.

Based on the CAFB General Plan (CAFB, 2003) and Charleston 2020 Plan (CAFB, undated), numerous construction, demolition, and infrastructure improvement projects are proposed to occur at CAFB over the next 10 years. The potential impacts of some of these projects have been assessed by previous EIAP documents, including by the 2007 CAFB Installation Development EA (e<sup>2</sup>M, 2007), which addressed all Base projects planned for the 2007 – 2012 period. Most of the projects planned over the next 10 years would occur in the developed portions of CAFB and none except for the Proposed Action would occur within the MFH area. Planned projects identified as having the greatest potential to impact the environment based on their size and projected land disturbance include construction of a Flightline Support Facility and associated building demolition, construction of an Avionics Complex and associated building demolition, construction of facilities for the Rapid Engineering Deployment Heavy Operational Repair Squadron, construction of a parking lot for Wing Headquarters, and construction of a Civil Engineer Complex and associated building demolition. Based on the 2007 CAFB Installation Development EA, no adverse cumulative impacts would result from the implementation of the projects planned through 2012 or when they are coupled with foreseeable projects beyond 2012 (e<sup>2</sup>M, 2007).

Based on planning schedules, one or more of the identified Base development projects may be implemented during the same time that the Proposed Action is implemented. The majority of the foreseeable actions involve construction/demolition and, therefore, would have environmental impacts similar to those expected under the Proposed Action, such as temporary increases in noise, air emissions, and traffic. Most of the planned Base development projects would occur in or around the airfield and none would occur within the MFH; therefore, adverse cumulative impacts associated with noise or air emissions are

not expected if the Proposed Action coincides with one or more of the planned projects. There is the potential for heavy traffic to occur if two or more construction/demolition projects are implemented at the same time; however, the cumulative impact would be temporary and could be minimized by making all Base access gates and routes available during the work period. Because the sites where the planned projects and the Proposed Action would occur are already developed, adverse cumulative impacts to soils, vegetation, or habitat would not occur. The combined effect of the Proposed Action and other foreseeable actions, regardless of their timing, would have positive cumulative impacts on the local economy resulting from short-term, temporary increases in employment and expenditures.

#### **4.16.2 No-Action Alternative**

Under the No-Action Alternative, no construction/demolition activities would occur. Therefore, the No-Action Alternative would have no cumulative impacts.

## 5.0 Plan, Permit, and Management Requirements

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Notification to the State of Carolina is required for demolition of buildings, whether they contain asbestos or not. A completed written notice form, "Asbestos Abatement Project License Application," must be submitted to SCDHEC at least 10 working days prior to initiation of any asbestos abatement (SCDHEC, 2008).

There is a regulatory requirement to obtain a SCDHEC NPDES General Permit for Stormwater Discharges from Construction Activities if one acre or more of land is disturbed during construction (in compliance with the provisions of the South Carolina Pollution Control Act, S.C. Code Sections 48-1-10 *et seq.*, 1976) (SCDHEC, 2006). The Proposed Action would involve over one acre of ground disturbance and, therefore, the PO would be required to obtain this permit. Under this permit, the PO would be required to prepare and implement a SWPPP that would include BMPs and soil stabilization/revegetation measures to minimize impacts to water quality.

## 6.0 List of Preparers

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Tunch Orsoy/EA Task Manager/19 years of experience/Master of Science

Kira Zender/Project Manager/14 years of experience/Master of Science

Russell Short/Senior Technical Manager/29 years of experience/Master of Science

Rich Reaves/Environmental Scientist/15 years of experience/Ph. D.

Angela Dalsis/Environmental Scientist/8 years of experience/Bachelor of Science

Mike Brose/Environmental Scientist/12 years of experience/Bachelor of Science

David Dunagan/Technical Editor/29 years of experience/Master of Arts

Laura Galloway/GIS Specialist/5 years of experience/Masters of Science

Marian Stuart/Graphic Designer/14 years of experience/Associate of Arts

Robin Nagy/Word Processor/35 years of experience/Associate of Arts

## 7.0 List of Contacts

---

Bill Anonie, Contract Project Manager, Booz Allen Hamilton, Inc.

Bo Camp, EIAP/EBS Program Manager, 437 CES/CEAO Charleston AFB

Stephen Campbell, Housing Facility Chief, 437 CES/CEAC Charleston AFB

Mark Fetzer, EIAP/EBS Program Manager, HQ AMC/A7PI Scott AFB

Keith Thompson, Natural/Cultural Resources Manager, 437 CES/CEAN Charleston AFB



## 8.0 References

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APPENDIX A

## II CEP Correspondence

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DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 437TH AIRLIFT WING (AMC)

JUL 23 2009

MEMORANDUM FOR See Distribution List

FROM: 437 CES/CEAO  
100 W. Stewart Ave  
Charleston AFB, SC 29404-4827

SUBJECT: Draft Environmental Assessment and Draft Finding of No Significant Impact for Military Family Housing Privatization at Charleston Air Force Base, South Carolina

The United States Air Force (USAF) has prepared a Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for the privatization of Military Family Housing (MFH) at Charleston Air Force Base (AFB), South Carolina. Under the Proposed Action, the USAF would transfer ownership of the MFH units, associated infrastructure, and certain utilities that exclusively serve the MFH area to a private sector Project Owner (PO). The USAF would retain ownership of the land, but would transfer management of the land to the PO through a 50-year lease arrangement.

In accordance with Executive Order 12372, *Intergovernmental Review of Federal Programs*, we request your review of the attached Draft EA and Draft FONSI. Please provide any comments or information no later than 30 days from the date of this letter by mail to Mr. Joe Camp, 437 CES/CEAO, 100 W. Stewart Ave., Charleston AFB, South Carolina 29404-4827.

Also enclosed is the distribution list of federal, state, and local agencies and Native American Tribes that are being contacted regarding the proposal. If you feel there are additional agencies or Tribes that should review and comment on the proposal, please feel free to share the letter and attachments with them.

If you have any questions, please feel free to call me at (843) 963-4125 or email me at [joe.camp@charleston.af.mil](mailto:joe.camp@charleston.af.mil).

JOE CAMP  
ELAP/EBS Program Manager  
437 CES/CEAO, Charleston AFB

Attachments:

1. Draft EA for MFH Privatization at Charleston AFB
2. Draft FONSI for MFH Privatization at Charleston AFB
3. Distribution List

# Environmental Assessment for Military Family Housing Privatization at Charleston Air Force Base, South Carolina

## Interagency and Intergovernmental Coordination for Environmental Planning List

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### Federal Agency Contacts

Mr. Tim Hall  
Field Supervisor  
U.S. Fish and Wildlife Service  
176 Croghan Spur road, Suite 200  
Charleston, SC 29407

Mr. David Chamberlain  
U.S. Army Corps of Engineers  
Charleston District  
Regulatory Division  
69A Hagood Avenue  
Charleston, SC 29403-5107

### State and Local Agency Contacts

Ms. Christine Sanford-Coker  
Regional Director  
Region 7 Environmental Quality Control Office  
South Carolina Dept of Health and  
Environmental Control  
1362 McMillan Avenue, Suite 300  
Charleston, SC 29405

Mr. John Frampton  
Director  
South Carolina Dept of Natural Resources  
PO Box 167  
Columbia, SC 29202

Ms. Susan Davis  
South Carolina Dept of Natural Resources  
Region 4 - Charleston  
PO Box 12559  
Charleston, SC 29422

Bill Gore  
North Charleston Dept of Planning and  
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North Charleston, SC 29419-9016

Mr. Curtis Joyner  
Office of Ocean and Coastal Resource Mangement  
South Carolina Dept of Health and Environmental  
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Charleston, SC 29405

Ms. Caroline Wilson  
Review and Compliance Coordinator  
South Carolina Dept of Archives and History  
8301 Parklane Road  
Columbia, SC 29223

### Tribal Contacts

Michell Hicks, Principal Chief  
Eastern Band of Cherokee Indians  
PO Box 455  
Cherokee, NC 28719

Glenna Wallace, Chief  
Eastern Shawnee Tribe of Oklahoma  
PO Box 350  
Seneca, MO 64865

Principal Chief A.D. Ellis  
Muscogee (Creek) Nation of Oklabhoma  
PO Box 580  
Okmulgee, OK 74447

Dr. Wenonah Haire, CIN-THPO  
Catawba Indian Nation  
Tribal Historic Preservation Office  
1536 Tom Steven Road  
Rock Hill, SC 29730

# South Carolina Department of Natural Resources



John E. Frampton  
Director  
Robert H. Boyles, Jr.  
Deputy Director for  
**Marine Resources**

August 20, 2009

Mr. Joe Camp  
437 CES/CEAO  
100 W. Stewart Ave.  
Charleston AFB, SC 29404-4827

Re: Draft Environmental Assessment (DEA) and Draft Finding of No Significant Impact (FONSI) for Military Family Housing Privatization at Charleston Air Force Base, South Carolina.

Dear Mr. Camp:

Personnel with the South Carolina Department of Natural Resources have reviewed the DEA and FONSI for the above referenced project and offer the following comments.

After a thorough review, our department finds the submitted Environmental Assessment sufficient in addressing the full range of potential environmental impacts associated with the proposed project. We concur that the proposed project will not result in significant impacts to natural resources.

Sincerely,

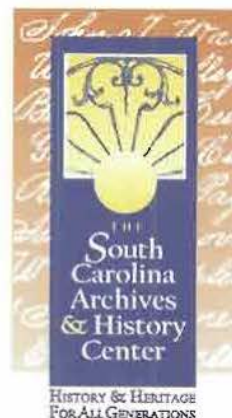
A handwritten signature in black ink, appearing to read "Susan F. Davis".

Susan F. Davis  
Coastal Environmental Coordinator



August 19, 2009

Joe Camp  
437 CES/CEAO  
100 W. Stewart Ave.  
Charleston AFB, SC 29404-4827



Re: Military Housing Privatization, Charleston Air Force Base, Charleston County, SC

Dear Mr Camp:

Thank you for your letter of July 23, which we received on July 25, regarding the above referenced project. We also received photos as supporting documentation for this undertaking. The State Historic Preservation Office is providing comments to the United States Air Force pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR 800.

Based on the description of the Area of Potential Effect (APE) and the identification of historic properties within the APE, our office concurs with the assessment that no properties listed in or eligible for listing in the National Register of Historic Places will be affected by this project.

If archaeological materials are encountered during demolition, the procedures codified at 36 CFR 800.13(b) will apply. Archaeological materials consist of any items, fifty years old or older, which were made or used by man. These items include, but are not limited to, stone projectile points (arrowheads), ceramic sherds, bricks, worked wood, bone and stone, metal and glass objects, and human skeletal materials. The federal agency or the applicant receiving federal assistance should contact our office immediately.

If you have any questions, please contact me at (803) 896-6169 or [cwilson@scdah.state.sc.us](mailto:cwilson@scdah.state.sc.us).

Sincerely,

Caroline Dover Wilson  
Review and Compliance Coordinator  
State Historic Preservation Office



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

176 Croghan Spur Road, Suite 200  
Charleston, South Carolina 29407



August 24, 2009

Mr. Joe Camp  
437 CES/CEAO  
100 W. Stewart Avenue  
Charleston AFB, SC 29404-4827

Re: Military Family Housing Privatization  
Charleston County, SC  
FWS Log No. 2009-I-0558

Dear Mr. Camp:

The U.S. Fish and Wildlife Service (Service) has reviewed the plans for this proposed project. Based on our review and the information received:

- ☐ It is our opinion that the proposed action will have no effect on resources under the jurisdiction of the Service that are currently protected by the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.)(Act). Therefore, no further action is required under Section 7(a)(2) of the Act.
- ☒ We concur with your determination that the proposed action is not likely to adversely affect resources under the jurisdiction of the Service that are currently protected by the Act. Therefore, no further action is required under Section 7(a)(2) of the Act.
- ☐ It is our opinion that the proposed action is not likely to have reasonably foreseeable adverse effects on resources under the jurisdiction of the Service that are currently protected by the Act. Therefore, no further action is required under Section 7(a)(2) of the Act.
- ☐ The proposed project may impact wetlands. Please contact the U.S. Army Corps of Engineers, Charleston District for more information.



If you should have any questions, please contact Ms. Melissa Bimbi at (843)727-4707, ext. 217 and reference FWS Log No. 2009-I-0558.

Sincerely,

A handwritten signature in blue ink, appearing to read 'T. N. Hall', with a long horizontal flourish extending to the right.

Timothy N. Hall  
Field Supervisor

TNH/MKB



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
CHARLESTON DISTRICT, CORPS OF ENGINEERS  
69A Hagood Avenue  
CHARLESTON, SOUTH CAROLINA 29403-5107

September 9, 2009

Regulatory Division

Mr. Joe Camp  
437 CES/CEAO  
100 W. Stewart Avenue  
Charleston AFB, South Carolina 29404-4827

Re: SAC#2009-00859-2JR  
Charleston County


Dear Mr. Camp:

This is in response to your letter of July 23, 2009, requesting a review of a Draft Environmental Assessment and Draft Finding of No Significant Impact for Military Family Housing Privatization at Charleston Air Force Base, South Carolina.

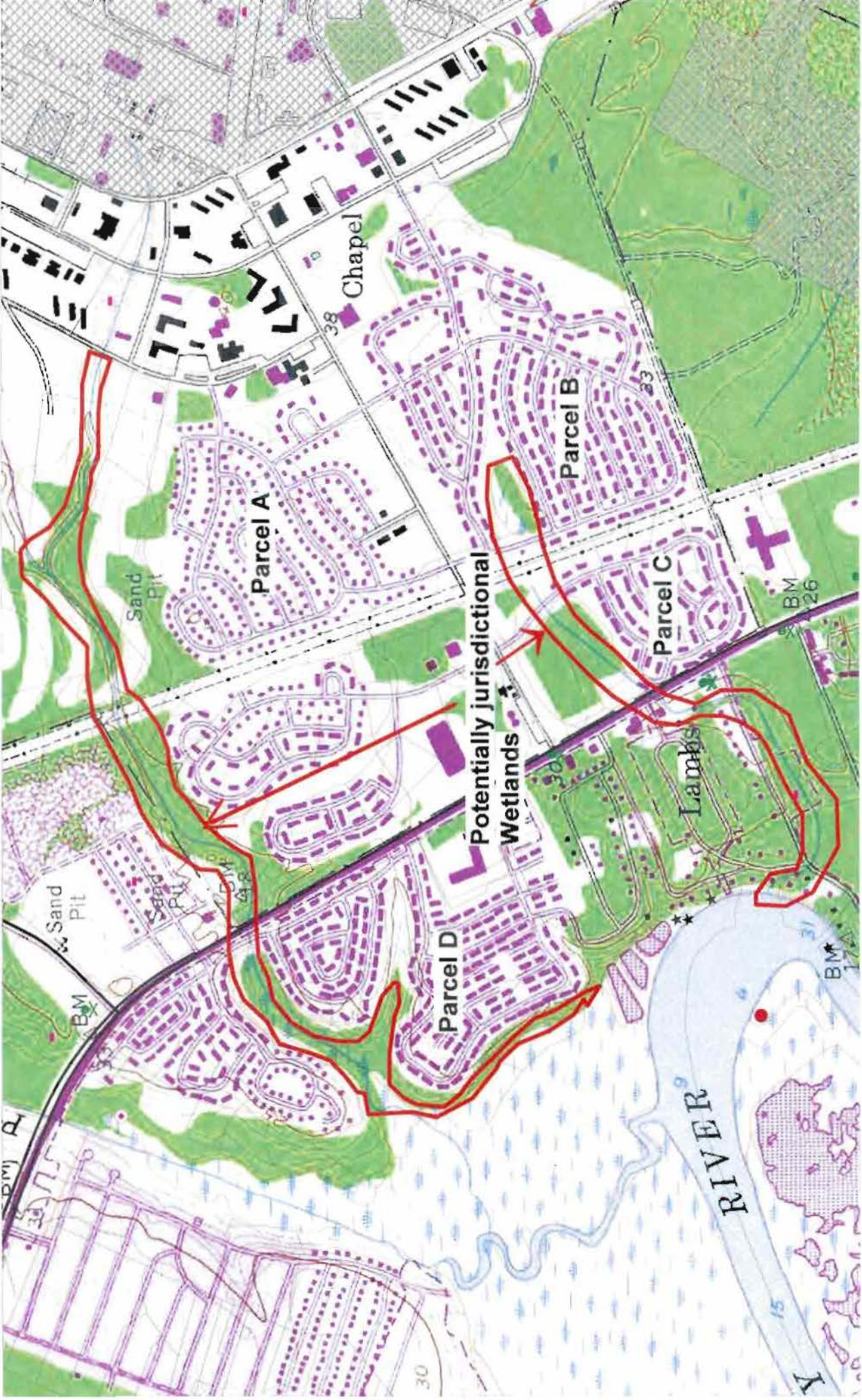
Based on a review of the information submitted and a review of aerial photography, topographic maps, National Wetland Inventory maps and soil survey information, it has been concluded that there are may be wetlands or waters of the United States located on the west and northwest portion of Parcel D, the middle area of Parcel C, and the northwest portion of Parcel B, as depicted on the enclosed sketch, that may be subject to the jurisdiction of this office. This office should be contacted prior to performing any work in or around these wetlands or other waters of the United States in order for a more accurate delineation to be made.

In future correspondence concerning this matter, please refer to SAC#2009-00859-2JR. If you have any questions concerning this matter, please contact Robin Collier-Socha at 843-329-8044 or toll free at 1-866-329-8187.

Respectfully,

  
Charles R. Crosby  
Chief, South Branch





From: Camp, Joe V Jr Civ USAF AMC 437 CES/CEAO  
Sent: Monday, September 21, 2009 8:45 AM  
To: 'Gore, Bill'  
Subject: RE: Draft Environmental Assessment and Draft finding of No Significant Impact for Military Housing Privatization at CAFB, SC

Dear Mr. Gore,

Thank you for your comments on the Draft Charleston AFB Military Family Housing Privatization EA. After reviewing your input, we agree that the description of the City of North Charleston presented in Section 3.1.1 of the EA does not paint an accurate picture of the City. We have removed the language considered "disparaging and dismissive" and have revised this section to include the following language in the Final EA: "North Charleston is the State's third largest city. It encompasses more than 76.6 square miles and has a current population of more than 95,000.

Incorporated in June 1972, North Charleston has grown primarily through annexation of developed land. The City has a rich history that includes hosting a number of important military installations. Today, North Charleston has a vibrant economy and it can boast to be the State's leader in retail sales for the 16th consecutive year. North Charleston is an important freight trans-shipment point, having two major railheads, two port facilities, and a general aviation airport."

The 2006 Housing Requirements and Market Analysis, which identified that CAFB has a surplus of 247 housing units, was based on projected MFH housing needs and the quantity and condition of existing housing at the Base. There are numerous reasons for the projected unit surplus, which include mission requirements which are dynamic, and the condition of existing housing, a significant portion of which is substandard. Based on Air Force policy, senior officers must live on base. Other personnel can live on base or off base. Personnel who choose to live off base are not required to live within a certain distance to the Base based on Air Force policy. Your comments regarding the benefits that could be realized when personnel live in close proximity to the Base are valid and appreciated. As this issue is directed by policy, it is beyond the scope of analysis or discussion presented in the EA.

Your comment that the minority percentage of the City of North Charleston is greater than that of Charleston County or the State is acknowledged. We also acknowledge that there are Census Tracts close to the Base with high minority percentages that were not mentioned in the EA. The Census Tracts presented in the EA were selected because they are located adjacent to the project parcels. Because the Proposed Action would not adversely affect human populations, it would not have disproportionately high or adverse human health or environmental effects on minority or low-income populations. This analysis is considered valid regardless of the total number or percentage of minorities or low-income residents that live in proximity to the area, or the distance of their residences from the area.

Thanks again for your comments and we look forward to coordinating with you on future actions.

Sincerely,



Bo Camp

-----Original Message-----

From: Gore, Bill [<mailto:bgore@northcharleston.org>]

Sent: Friday, September 04, 2009 12:15 PM

To: Camp, Joe V Jr Civ USAF AMC 437 CES/CEAO

Subject: Draft Environmental Assessment and Draft finding of No Significant Impact for Military Housing Privatization at CAFB, SC

Dear Mr. Camp,

I've had an opportunity to review the draft Environmental Assessment and have comments and some concerns.

My first concern is the following excerpt from the report which suggests among other things that North Charleston had little land planning:

"The Base is within the City of North Charleston, which is located approximately three miles north of the City of

Charleston. Charleston is a popular tourist destination well known for its rich culture and

history. Development in the City of North Charleston has occurred rapidly and with little

land use planning, resulting in incompatible land uses adjacent to each other and strip

commercial development along the major roadways (CAFB, 2003). Most of the land in the

vicinity of CAFB has been strip mined or developed. CAFB is bordered by residential,

commercial, industrial, and open space land uses."

On the contrary, North Charleston has a history of land planning that goes back over 90 years. I have attached a copy of a color rendering of the North Charleston Subdivision dated 1913 that was prepared by the Berkman Agency, which was one of the leading planning firms in the country at that time. The rendering is an advertisement for the newly planned North Charleston development that stretched from Filbin Creek to Noisette Creek. I also attached a copy of a portion of the original subdivision plan that they prepared and followed. This area fairly closely mirrors the original area of incorporation in 1972. Chicora was also developed as a planned community as was Charleston Farms and a host of others. The City of North Charleston has consistently engaged in Comprehensive land use planning since its creation in 1972 and has recently gained note for several planned sustainable communities built here. If you need more documentation to substantiate North Charleston's long history of planning, and to refute the above noted



disparaging and dismissive excerpt, please let me know and I will be happy to provide it to you.

The yellow highlighting on the Park Circle plan was mine and was intended to show the proximity of industrial uses to residential settlements. You can also see the smokestacks in the rendering which in that day and age represented jobs, progress and prosperity. Planned residential settlements built around industrial sites were common though these same images evoke a much different response today. Some who are unfamiliar with this history are inclined to retroactively apply today's standards to yesterday's development patterns reaching the wrong conclusions about how things came to be. It probably also deserves to be said that military industrial uses have always had a big presence in our community and that these uses developed their own support housing much of which remains to this day or has recently been redeveloped. As for the comment about strip commercial zoning, this is a phenomenon that has occurred all over the country and certainly in the City of Charleston, Mt. Pleasant and elsewhere (US 17 Savannah Highway, SC 61 Ashley River Road, US 17 Business and Bypass Routes, Folly Road and so on). North Charleston was not exempt from this, but is no more guilty of it than any other community.

The excerpt also comments on history. Much of our history has been to play host to a number of United States Military installations including the Charleston Naval Base and Shipyard as well as the Charleston Air Force Base. Other branches have also had significant presence here during times of war. We see our history of supporting the United States military in projecting military might around the world in defense of democracy and freedom through two World Wars and several other conflicts as a proud history second to none.

As for the rapid growth and development mentioned in the excerpt, the North Charleston community has been emerging here for the last 100 years. It has been a corporate entity since 1972, and has grown primarily through annexation of developed land.

Your description of North Charleston might have noted that it is centrally located in the region, has a robust industrial base, has consistently led the State in Retail sales for the last decade, that it is the State's third largest City, and that it is an important freight transshipment point with two major railheads, two port facilities, and a general aviation airport. I mention that last on the assumption that our role in the movement of freight might somehow be relevant or at least interesting to the Air Base mission.

#### QUESTION AND COMMENT

I had a question as to whether the analysis considered the number of base personnel who may live elsewhere in the region and commute to work, and the impact that their daily trips to and from work may have on local road congestion? The report indicates the number of surplus units without any real discussion of the context in which they became surplus.

The decision to allow or incentivize personnel to live off base without regard to where they live can exacerbate sprawl or suburban development.

The Air Force might take the approach of providing incentives for its personnel to live on or very near the base, which would reduce fuel consumption and associated pollution, contribute to force readiness, reduce travel time, and ease congestion on already taxed commuter routes. Some consideration should be given to the impact to the community of the larger policy to allow personnel to live off base without any concern for the resultant commuting patterns as it seems that policy may have some impact of the demand for on-base housing. The City of North Charleston has always had a residency requirement for its employees, and have found this to be a more sustainable approach. An employer as large as the Air Force Base can likely impact regional commuting patterns through its decision making, and that decision making should consider those implications.

#### ENVIRONMENTAL JUSTICE

The discussion in the environmental justice section seemed to refer back to Charleston County or the State for comparison to several census tracts without any mention of the percentage of "Minority" persons in the City of North Charleston which is greater than either the State or County. The percentage here in the City was about at 50% at the time of the 2000 census. It also seemed that there are census tracts next to the base which were not included in the analysis in spite of a relatively significant or high "Minority" presence. An example would be Census tract 33.

Please let me know if you need further input or clarification of my comments. Best wishes,

William B. Gore

Planning Director/Zoning Administrator

City of North Charleston, SC

**APPENDIX B**

# **Public Involvement**

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TUNCH ORSOY CH2M HILL  
4350 WEST CYPRESS ST., SUITE 600  
TAMPA FL 33607

## AFFIDAVIT OF PUBLICATION

# The Post and Courier

State of South Carolina

County of Charleston

Personally appeared before me the undersigned advertising clerk of the above indicated newspaper published in the city of Charleston, county and state aforesaid, who, being duly sworn, says that the advertisement of

(copy attached)

appeared in the issues of said newspaper on the following day(s):

07/23/09 Thu PC

07/23/09 Thu CNW

at a cost of \$122.07

Account# 220299

Order# 136338

P.O. Number:

Subscribed and sworn to before

me this 24<sup>th</sup> day

of July

A.D. 2009

*Keisha Edging*  
advertising clerk

*Sherry Duben*  
NOTARY PUBLIC, SC

My commission expires

My Commission Expires 10/10/13

### Notice of Availability Draft Finding of No Significant Impact (FONSI) for the Environmental Assessment (EA) of Military Family Housing (MFH) Privatization at Charleston AFB, South Carolina

The United States Air Force is proposing to issue a FONSI based on the findings of an EA prepared for the privatization of MFH at Charleston AFB. The analysis considered potential effects of the proposed action on 18 resource areas: land use, noise, geology, topography, soils, hydrology, water quality, biological resources, safety and occupational health, air quality, hazardous materials and wastes, cultural resources, socioeconomic, community resources, environmental justice, protection of children, traffic flow, and utility infrastructure. The results, as presented in the EA, show that the privatization of MFH at Charleston AFB would not have a significant impact on the environment, indicating that a FONSI would be appropriate. An Environmental Impact Statement should not be necessary to implement the proposed action. Copies of the Draft FONSI and the EA are available for review beginning July 24, 2009 at the Dorchester Road Regional Library, 6325 Dorchester Road, North Charleston, South Carolina, 29418. The comment period will be 30 days and will end on August 22, 2009. Comments should be submitted in writing to Mr. Joe Camp, 437 CES/CEAO, 100 W. Stewart Ave., Charleston AFB, South Carolina 29404-4707. AD# 136338